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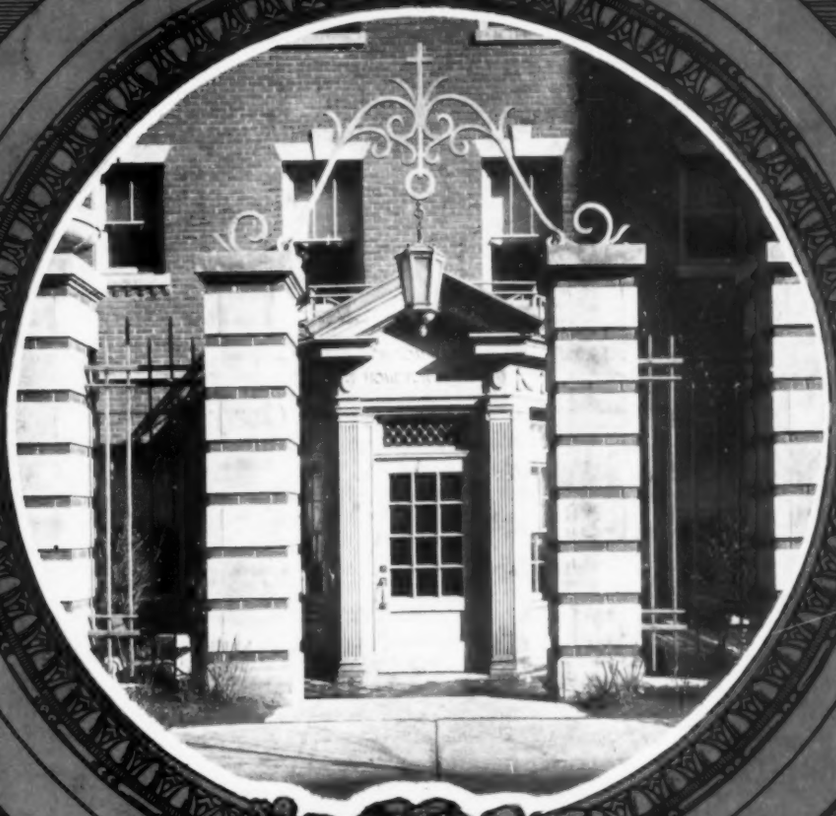

The MODERN HOSPITAL

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment and Administration of Hospitals, Sanatoriums and Allied Institutions, and to Their Medical, Surgical and Nursing Services

Vol. XXIV *April 1925* No. 4

THE EXTENSION OF HOSPITAL PRIVILEGES TO ALL PRACTITIONERS OF MEDICINE*

BY S. S. GOLDWATER, M.D., DIRECTOR, MOUNT SINAI HOSPITAL, NEW YORK, N. Y.

HOSPITALS not under the control of medical schools may think that in the matter of medical education theirs is only a subordinate and unimportant part. In fact, their position is not only important—it is supremely important; for while the medical school may sell the student his admission ticket to the play, seats are not ordinarily reserved, and it remains for the hospital eventually to usher the medical graduate to his place. It was this thought chiefly that prompted me to attempt, on this occasion, to enlist your interest in the extension of hospital privileges to all practitioners of medicine. It seemed appropriate that, at a conference on medical education, one who is, in a sense, an official spokesman for hospitals, should urge that the most effective possible use be made of the hospital's extensive facilities for medical education.

Resentment Toward Closed Staff

These thoughts were reinforced by the receipt, in rapid succession, of several letters from hospitals which were greatly troubled because, after years of peaceful existence as staff or closed hospitals, they were being forced, by the agitation of outside physicians and their sympathizers, to reconsider the basic principles of their organization. It seems that wherever hospitals set up a privileged class of practitioners, a natural resentment is aroused which will not down. Even where, for the moment, no flaming antagonism appears upon the surface, opposition smoulders beneath, and thus every closed hospital may eventually be compelled, publicly and conclusively, either to justify or to abandon its exclusiveness.

I thought, finally, of the parlous state of the family doctor, and especially of the country doctor, and of the strong and ever stronger disinclination of medical graduates to lead lives of professional isolation, which, for a number of years, has been so conspicuously reflected in every general discussion of medical education.

My assignment in the present symposium does not permit me to discuss at length the respective merits of the closed and open hospital; we shall learn from other speakers about the peculiar educational opportunities and responsibilities of these two contrasting types. But I can hardly proceed without referring briefly to at least one of the characteristics of the open hospital.

Opportunities of Open Hospital

It is to the credit of the open hospital that it brings into touch with an organized medical institution many physicians who under a more restricted or exclusive hospital system would be deprived of those helpful and stimulating medical contacts without which they are in danger of deteriorating in medical knowledge and proficiency. Granting that an open hospital is, of necessity, a relatively loose organization, in which uniformity of procedure is difficult of attainment, and from which the most systematic and illuminating study of groups of cases by organized teams of clinicians and laboratory men is ordinarily excluded, the open hospital, nevertheless, affords far better opportunities for fruitful clinical study than can be found in the lonesome and dreary circumstances of private practice. On this ground I have elsewhere urged that in every important cen-

*Read before the American Conference on Hospital Service, Chicago, Ill., March 12, 1925.

ter of population there is need of open as well as of closed hospitals; but today I ask permission to recast, on far broader lines, the question of the open versus the closed hospital.

Proceeding from the basic idea that without a hospital connection a physician of ordinary talents cannot thrive mentally, or, at least, is in grave danger of contracting loose habits of thought, of becoming careless and superficial in his clinical methods, it follows that it is the duty of physicians to seek hospital connections, and that it is equally the duty of those who control hospitals to facilitate such connections. If anything can be done to liberalize the closed hospital without destroying its efficiency as a teaching and research center, it should be done; if any suggestion can be offered that will tend to improve the character of the service in open hospitals, it should be adopted; but these steps, however important in themselves, are of far less concern than the thought I present today, namely, that *the need of a hospital connection for every practicing physician should be the controlling factor in all community hospital organization.* Leaving out of the picture for the moment physicians in sparsely settled centers where hospitals are and must for some time—perhaps for all time—remain non-existent, I submit that it would be wise for the American Medical Association, and for all other organizations interested in aiding the medical practitioner and in stimulating medical progress, to unite in a determined effort to reform existing conditions, so that every physician, throughout the years of his active practice, may enjoy and may profit by the advantages of a healthy and progressive professional environment.

Contrasting Professional Careers

It is not necessary, before this audience, to contrast the unlimited opportunities for professional development which are open to the hospital physician, and the narrower professional life to which physicians without hospital connections are confined. (I am using these terms, of course, with special reference to scientific proficiency and technical skill, and not with any idea of belittling the character or the achievements of the unattached family practitioner, who occupies a thoroughly dignified position as a useful member of society, and a highly privileged one with respect to many finer human relationships).

This annual congress on medical education has made every effort to see medical education steadily and to see it whole and, far from restricting its attention to problems of undergraduate teaching, it has repeatedly emphasized the need and importance of wider post-graduate instruction. Three excellent papers, presented last year by Dr. Meeker, Dr. Manning and Dr. Butler, dealt with the subject of post-graduate teaching as a phase of university extension. These papers referred especially to the achievements of Pennsylvania and of North Carolina; a complete record of post-graduate medical teaching under university auspices would include an account of notable achievements of similar kind in other states, among them my own state of New York, where remarkable progress in post-graduate teaching has been made during the past two years. But however valuable and important the opportunities which are thus created for the unattached physician, these opportunities cannot in their ultimate development or extension do more than to still, temporarily, the knowledge-hunger of a very small proportion of the rank and file of the profession.

University Extension Teaching

All honor to the exceptional men who so earnestly desire to overcome their professional disqualifications or limitations that they are willing for a time to forego the emoluments of private practice in order that they may share the stimulating atmosphere of a modern hospital, may sit at the feet of worthy teachers, and may witness the progress or the cure of disease under conditions of careful observation and precise control. For such men university extension teaching is a boon. But university extension teaching can do no more than create a special and limited opportunity; it functions locally and interruptedly in a field where educational processes should be at work universally and continuously. "Running," it is said in one of La Fontaine's fables, "is of no use. The thing to do is to start in time." The physician who would make full use of the knowledge of his age must start in time and keep going.

I said a moment ago—and this is the burden of my argument—that the need of a hospital connection for every practicing physician should be the controlling factor in all community hospital organization. Just what does this mean—what can it be made to mean—in actual practice?

Consider, first, counties or localities which are entirely without hospitals. The valuable reports of the Council on Medical Education of the American Medical Association tell us how many of these there are and show how they are distributed. At first blush, it may seem idle to talk about providing hospital connections for all of the doctors in these districts, since without hospitals there can be no hospital connections; but it is precisely in these localities that the opportunity exists for attaining the desired end with the

least difficulty! These counties are without hospitals today, but at any moment a hospital project may be launched in any of them; indeed, next year, or the year after, some of these localities are certain to appear on the hospital map in a new color. Let each new hospital which begins with a clean slate, be organized for the benefit of the entire medical profession of the locality. New hospitals can do this with comparative ease, for no intrenched privileges block the way. But slight obstacles even a new hospital may encounter, as a concrete case in my own experience will show.

A little while ago I was invited by the citizens of a town of 15,000 inhabitants, who had never had a hospital, but who were about to establish one, to attend a public meeting called to discuss hospital organization. In the course of the debate it became evident that the townspeople were eager to make their hospital as widely useful as possible, but it was equally plain that some of the physicians present were thinking in terms of personal advantage. In a situation like this an understanding of basic principles of hospital administration is invaluable; a hospital which is consciously moving toward a definite goal cannot be easily swerved from its appointed path.

A Broad or Narrow Policy

Here was a community that had never had a hospital and that had suffered grievously from the lack of one. The townspeople knew that the medical practice of the town was on a relatively low plane, and they looked to the new hospital to elevate it; yet they were being asked to adopt a course that would have been beneficial to a mere handful of physicians instead of one that would raise the standards of the entire local profession. There were, of course, certain local physicians who were more competent than others, and it was proper to assign to these superior men the most responsible positions in the proposed hospital organization; but to have taken in these men alone, while thrusting out those who most sorely needed the hospital's aid and influence, would have been to perpetuate, for a majority of the local doctors, the deplorable effects of professional isolation, from which the hospital offered the natural and the only means of escape. In this situation it became my task to explain that one of the primary objects of community hospital organization is to provide a hospital connection for every reputable medical practitioner, and I had the satisfaction of being assured subsequently that the community had subscribed to this principle, and that the new hospital was being organized accordingly. This single experience shows, I think, that we are dealing today with a proposition that has important practical bearings.

Let us consider, next, a community in which a hospital has already been established on rigid staff lines, and which proposes to establish another. In the absence of any guiding principle, the second hospital is likely to copy the methods and organization of the first. If, however, the doctrine of universal hospital association is accepted as valid, the second hospital will be organized as an open hospital, and will offer a common meeting ground for the entire local medical fraternity. Its aim will be not to compete with the pre-existing staff hospital on the latter's ground, but to round out the medical organization of the community, and in its own way to make a contribution toward the spread of sound clinical practice.

How the Closed Hospital May Serve

What bearing, if any, has the principle under discussion on the closed hospital? To me it suggests that without sacrificing those elements of strength which are characteristic of the well-organized staffed hospital, the closed hospital should utilize every possible means for widening its professional influence. Staff positions should

Open or Closed Hospitals?

"IT seems that wherever hospitals set up a privileged class of practitioners, a natural resentment is aroused which will not down. Even where, for the moment, no flaming antagonism appears upon the surface, opposition smoulders beneath, and thus every closed hospital may eventually be compelled, publicly and conclusively, either to justify or to abandon its exclusiveness."

"If anything can be done to liberalize the closed hospital without destroying its efficiency as a teaching and research center it should be done; if any suggestion can be offered that will tend to improve the character of the service in open hospitals, it should be adopted; but these steps, however important in themselves, are of far less concern than the thought I present today, namely, that the need of a hospital connection for every practicing physician should be the controlling factor in all community hospital organization."

be created for as many clinical and laboratory assistants as the service can healthfully absorb—and the number of men that can be comfortably tucked under the blanket of a hospitable staff organization is truly astonishing! The appointment of temporary volunteers who are capable of carrying on intensive studies which are beyond the capacity or the available time of the regular staff, should be encouraged. Invitations should be extended to the practitioners of the neighborhood to attend clinical and pathological conferences. Formal post-graduate teaching should be organized—under university auspices, if possible; independently of any medical school, if necessary. In some cases, facilities for the treatment of private patients may, without detriment to the hospital, be placed at the disposal of an associate or "courtesy" staff. Diagnostic aid should be extended to unattached practitioners. Encouragement and practical assistance should be given to open hospitals that are sincerely striving to improve the quality of their work. The educational efforts of the county medical society should be seconded. A reasonable rotation in office should be insured by the adoption of rules prescribing age and service limits. The hospital should lend a willing ear at all times to unattached physicians who believe themselves to be victims of an unduly narrow hospital policy, and who offer suggestions for extending the privileges of the hospital to a larger group.

These are not fanciful or far-fetched suggestions; they are all questions of policy and procedure which come up from time to time, in actual hospital administration. I have indicated the manner and the spirit in which I believe such questions should be handled; and I hold that they cannot be treated otherwise by any hospital which is seeking sincerely to stretch its educational service to the widest practicable limits.

Twenty years ago the most pressing problem of medical education in the United States was that of undergraduate teaching. The organization of undergraduate instruction is still an unfinished chapter, but the actual treatment of the sick is influenced far more by mental habits formed by the physician after graduation than by the knowledge he acquires as an undergraduate student. The key to nearly everything that makes for efficient medical practice today is in the hands of the hospitals. Their duty is plain—they must open wide the door of opportunity, so that the entire medical profession may enter in, for the fruits of medical progress belong of right to the many, not to the few.

INTERSTATE POST-GRADUATE CLINIC TOUR TO START NEXT MONTH

The interstate clinic tour which is to be conducted under the direction of the Tri-State District Medical Association, will start on its Canadian and European tour May 17, according to the announcement of Dr. William B. Peck, Freeport, Ill., managing director of the tour. The tour will be limited to 300 travelers from medical men of good standing in the profession in the United States and Canada. Up to February 13, 269 had registered.

Clinics in Montreal and Toronto will be visited up to May 23, when the party will sail for Liverpool. June 1-7 will be spent in London; June 8-10, in the clinics of Manchester, Liverpool and Leeds; June 11-12 in Dublin, then Belfast, Glasgow, and on June 17, the Royal Infirmary of Edinburgh; June 20, Newcastle and the University of Durham; June 21-23, a trip through the English lake country; June 23-27 in the clinics of Paris; then to Lyons, Strassburgh and back to Paris, sailing July 4, for Montreal or New York.

GRAINLANDS HOSPITAL
VALHALLA, N.Y.
INTERNE'S RECORD

Evans — Surname
Edward — Christian Name
Allston — Middle Name

Home address 108 John Street, New Haven, Connecticut
High school degree or equivalent Danbury High School, Danbury, Connecticut — June 1915
Academic degree of S. B. — From University of Chicago — Date June 1919
Medical degree of M. D. — From Yale University — Date June 1923
Other degrees or internships — From — Date
Recommended by (See letters on file) Dr. John Jones, University of Chicago; Dr. Henry James, Yale University Medical School
Reported for duty July 1, 1923 — First impression Favorable. Is slow and somewhat over-confident. Obliging and pleasant.

Service	Began	Ended	Punctuality	Personality	Technical Ability	Deaths	Autopsies	Remarks
Tuberculosis	7-1-23	8-14-23	80	70	75	12	4	Slow but willing
Pediatrics and Obstetrics	8-17-23	10-1-23	75	75	75	0	0	Friction with head nurse
Psychopathic and County Penitentiary Clinics	10-2-23	11-16-23	80	80	75	2	2	Handles work with prisoners well
Genito-urinary, X-Ray, and Gynecology	11-16-23	1-1-24	75	85	80	1	1	Attending gynecologist gives good report
Male Medical and Surgical	1-2-24	2-16-24	80	85	80	9	7	Surgical technic fair. Poor assistant
Female Medical and Surgical; Eye	2-17-24	4-2-24	90	80	80	1	0	Good report of work in eye clinic
Chronic Diseases Neurology	4-3-24	5-17-24	85	85	80	14	2	Slow with progress noted
Contagious Laboratory	5-17-24	7-1-24	80	81	78	0	0	Work in laboratory very satisfactory
Totals and Averages			80.6	80.1	77.9	29	16 (55%)	

General Impression A reliable man, not brilliant. Needs more hospital or other training before practice. Believe he is a safe man who would recognize his limitations. Interested especially in Ophthalmology.
Vacation December 23 to January 5 — Length of service 12 months — Left service July 1, 1924
General Remarks Goes to Eye and Ear Hospital for year's service
Diploma awarded July 1, 1924 — Key July 1, 1924

M. D.
DIRECTOR

INSTALLATION OF ELECTROCARDIOGRAPHS IN HOSPITALS

By C. W. MUNGER, M.D., Director, Grasslands Hospital, Westchester County, Valhalla, New York, and DON D. LYON, M.D., Cardiologist, Blodgett Memorial Hospital, Grand Rapids, Mich.

TEN years ago the number of electrocardiographs in use in the United States was exactly four. Manufacturers estimate that there are now four hundred instruments in use. This specialized and delicate apparatus was for several years available only in the large teaching hospitals. The rank and file of hospitals did not promptly adopt the electrocardiograph because it was expensive and complicated and because there was a dearth of thoroughly trained cardiologists. The earlier electrocardiographs needed to be protected from all manner of vibration and required considerable outlay in repairs and new strings.

Development of this type of equipment has been rapid. It has been possible to reduce the cost somewhat, and the instruments have been so perfected that unusual building operations are no longer necessary in connection with their installation. These facts, coupled with the tremendous growth in the importance of electrocardiography in diagnosis, have prompted more hospitals to purchase equipment.

In the majority of hospitals it has been necessary to install the electrocardiograph in buildings already constructed. The present article will deal mainly with that phase of the problem. One of the writers has had the responsibility for the installation of equipment in three different institutions, and has learned something of what not to do from each installation.

As an outline for hospitals uncertain as to just what equipment is needed, the following lists are suggested:

Indispensable Equipment

1 electrocardiograph
2 extra electrocardiograph strings
1 set of adult electrodes with bags
1 set children's electrodes with bags
2 extra bulb lamps for electrocardiograph
Surplus stock of film or bromide paper
3 developing trays
12 film clips
1 dark room lamp
3 rubber sheets—12x24 inches
1 cutting board
1 large printing frame with printing paper
Sufficient linen supply, such as towels and sheets
A record system carefully worked out
Suitable filing cases

Additional Desirable Articles

1 3-compartment developing tank
1 professional printing table
1 electric mounting press
1 tacking iron
1 serial number machine
1 four-wheel cart about 24x30 inches with upper and lower shelves for use in carrying materials through building
1 1,000 cc graduate
1 500 cc graduate

Location of Electrocardiograph Suite

It is preferable to have a suite of rooms for the electrocardiograph department. This should preferably include:

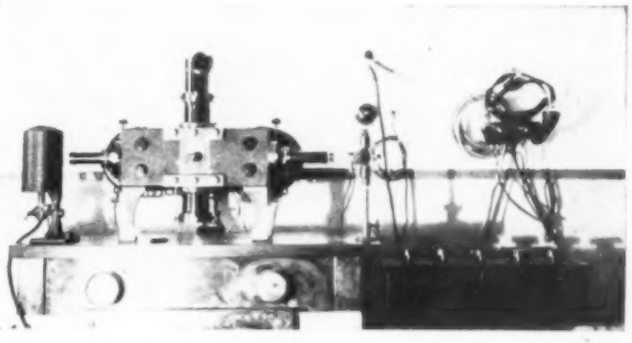


Figure 1. Electrocardiograph equipment showing wall connection and operator's telephone.

(1) Electrocardiograph room
(2) Dark room for developing and printing
(3) Two more rooms; a private office for the cardiologist, and a separate room for use of the technician and for filing.

If space permits, there may be also an examining room. However, this is not necessary for good work, in case the electrocardiograph is connected by wires to various parts of the hospital. In one hospital the electrocardiograph suite is adjacent to the out-patient department, making organization of a cardiac clinic and its supervision by the cardiologist relatively simple. In another institution where there were few out-patients, the electrocardiograph was placed in a well lighted space in the basement, adjacent to the elevator.

In another instance, the suite was located on the top floor adjacent to the operating room and laboratories. This location, which is in the daily line of travel of the attending physicians of the hospital, is an advantageous place for the department. It is a fact that services of this nature are utilized much more frequently by doctors if their attention is constantly called to the work of the department, and if a consultation may be obtained with the minimum effort.

Type of Room

The room for the instrument should be as light, cheerful, and well ventilated as any other room used for constant work. Dark, cheerless rooms with blackened walls are no longer needed, nor are they justifiable. Tracings may be taken in practically any room; the only reason for semi-darkness is for focusing the string shadow. A well-fitting window shade will shut out sufficient light for this purpose. Damp rooms should be avoided as they are harmful to any delicate apparatus. Freedom from dust is another desirable feature which is not always possible to obtain.

Where space is limited it may be necessary to use a single room both for the apparatus and for the dark room. If so, it is well to select a room having not more than two windows and make provision to exclude light by means of light-tight shutters, such as are frequently seen in x-ray rooms. A combination of a black window shade fitting into a groove, with sliding wooden shutters, edged with felt, is satisfactory for this purpose. With such an arrangement the room may be kept light for all work excepting printing and developing. The point to be borne in mind is that the room used for developing *films* must be just as dark as an x-ray developing room. If only bromide paper is used in the machine it is not necessary to have even the dark room entirely free from light, but sooner or later the operator will want to use films for which darkness is necessary.

Instrument Room—Free from Jarring

The instrument room itself should not be subject to any undue jarring from hospital machinery. It is well to place it as far as possible from these sources of vibration although, in hospitals where such is impossible, little or no difficulty is encountered with the newer types of equipment.

A greater source of difficulty is induction current, which must be carefully avoided. Alternating current near the machine or near the wires leading to the wards (unless they be especially protected) will always cause trouble. X-ray machines, static machines and elevator motors, near the electrocardiograph room are not advisable. Grounding of the instrument is necessary, but it should not be made by means of water or other pipes which supply x-ray rooms or pipes passing near other electrical apparatus. The walls of the room should not contain concealed electric wires carrying alternating currents. Buildings which are supplied by direct current offer much less difficulty in installation than do those where alternating current is used.

It is not necessary or desirable to bring each cardiac patient to the electrocardiograph suite for study. Current from the heart may be carried as far as 2,000 feet over wires properly insulated and grounded. Moving the patient from his bed to the central heart station is undesirable, as the exertion of being wheeled on a stretcher is sufficient to confuse the findings. Neither should the patient be taken to the instrument room where he sees the apparatus in use. Both the excitement and apprehension have distorting effects upon the heart action.

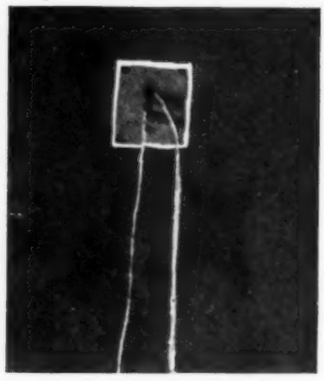


Figure 2. Wall station with electrocardiograph wires plugged in.

Some hospitals where electrocardiographs have been installed during the erection of the building have arranged for a plug at every bed, with three wires communicating to the central instrument. This is an ideal arrangement, but requires a good deal of work where buildings have already been erected, and it is questionable whether such an elaborate system of wiring is ever necessary.

Direct and Alternating Current

The manufacturers provide a special five-wire lead covered cable for connecting throughout the building. This cable is carried from the electrocardiograph to various strategic points throughout the building or buildings. In buildings where direct current only is used, this lead cable may be carried in any convenient path and without further insulation to any part of the building. Elevator shafts provide a handy route. In one instance an abandoned telephone conduit was successfully used; in another, the cable was run through an exposed metal molding attached to the walls. This last method is, of course, rather unsightly. The tubing covering the cable should be grounded at intervals to an iron rod driven into the ground and used for the grounding of no other electrical equipment. In the presence of alternating current, the wiring problem becomes more complicated. In this case, the lead cables must be further encased in iron conduits so as to prevent induction from the alternating current wires which may run near it.

The cables terminate on each floor in wall plugs into which a portable cable may be plugged and carried to the bedside of any patient. A four-wheel, rubber-tired cart is a convenience, as the coil of flexible cable, the bedside telephone, elec-

trodes, salt solution, rubber sheets, and other bedside materials may be kept upon it and readily transported to any part of the building.

The five wires in the cable mentioned above include three for electrocardiograph proper and

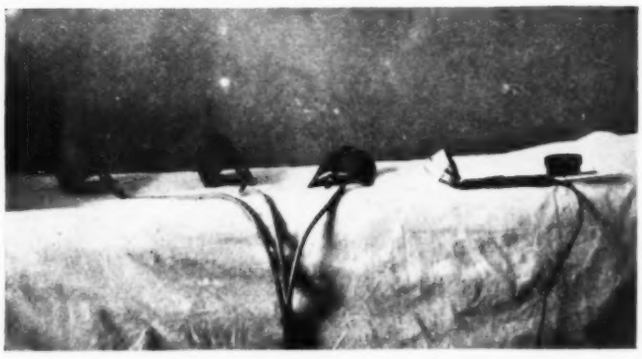


Figure 3. Transportable electrodes and bedside telephone.

two for an independent telephone system connecting the electrocardiograph room with the bedside. The operator at the instrument end has a special telephone set which may be strapped on, permitting him to talk over the telephone and still have both hands free for operating the machine. A buzzer on the bedside telephone may be rung from the electrocardiograph room. It is advisable to have two lengths of the flexible cable. For beds at the greatest distance from the wall station, two cables may be plugged together, but for those nearer but one length need be used, thereby making the operation more convenient.

Figure 4. Bedside telephone in use; electrodes are in place upon the patient's arms.

It might be of interest to readers to know the approximate cost of a complete electrocardiograph equipment. For a recent installation at the Blodgett Memorial Hospital, Grand Rapids, Mich., including instrument, all the articles included in both lists, wiring and installation expenses and traveling expenses of an engineer from the factory, (the electrocardiograph was wired to five different floors and there were ten wall stations) the total expense to the hospital was $3,427.50.

In conclusion, it may be stated that:

(1) An electrocardiograph may be installed with little confusion or interference in the daily work of the hospital.

(2) If the extension cable system is used the electrocardiograph may be made available to each bed at a surprisingly small wiring cost.

(3) The electrocardiograph, if properly handled, requires less repairs and adjustment than the average x-ray machine.

(4) Permanent wiring to every room is not absolutely essential to good work.

(5) Electrocardiography, while still in its infancy, has assumed a sufficiently important rôle to justify a department in every hospital aiming to provide complete diagnostic facilities.

STANFORD TO OFFER SPECIAL SUMMER COURSE IN NURSING

A special course for administrators and instructors in schools of nursing and a course in public health nursing will be given at Stanford University, Stanford, Cal., during the summer quarter, according to the recent announcement of Mr. John A. Sellards, director of the summer quarter. This is the first time that courses of this nature have been offered.

The special courses for administrators and instructors will be given from June 23 to July 24, while the public health nursing course will continue throughout the quarter.

Miss Maude Landis, Stanford School for Nursing, will be in charge of the courses, which will be open to high school graduates or those having acceptable educational qualifications. Other members of the faculty named in the announcement are Miss Daisy Dean Urch, director of the San Francisco Hospital School of Nursing; Sarah G. White, instructor in the theory of nursing at Stanford; Anna C. Jamme, director of the bureau of registration of nurses, California State Board of Health; Franklin S. Fearing, instructor in psychology, and George D. Shafer, instructor in physiology.

Courses will include general psychology, physiology and principles, methods, administration and correlation of theory and practice of nursing.

The course in public health nursing will be given in cooperation with the Palo Alto Public Health Department, and will be limited to ten members. Studies in this branch will include political science, public health and psychology. The instructors will be Mrs. Flora May Fearing, Margaret M. Lothrop and Louis C. Olsen, health officer at Palo Alto.

There is a time in every man's education when he arrives at the conviction that envy is ignorance; that imitation is suicide; that he must take himself for better for worse as his portion; that though the wide universe is full of good, no kernel of nourishing corn can come to him but through his toil bestowed on that plot of ground which is given to him to till.—*Emerson.*

X-RAY SERVICE IN THE SMALL HOSPITAL

By C. J. McCULLOUGH, M.D., Director, X-Ray and Radium Laboratory, Decatur and Macon County Hospital, Decatur, Ill.

WILLIAM CONRAD ROENTGEN, professor of physics in the University of Würtzberg, Germany, discovered the x-ray in 1895. Because of its unknown properties he designated it the x-ray, as the letter x is often employed in mathematics to denote the unknown quantity. In honor of the discoverer, the ray had come to be widely known as the roentgen ray and the science which has been developed about it as roentgenology. One skilled in this science is termed a roentgenologist and the finished film employed in medical diagnosis is termed the roentgenogram. There are many, however, who prefer to use the terms radiology, radiologist, and radiograph to refer to the science, the skilled worker and the film, respectively.

Wide Scope of X-ray Work

There can be little doubt that the most important purpose of the physician is the restoration of the sick and injured to a state of health. The modern hospital has been developed to facilitate this, by making accessible to the physician those aids in diagnosis and treatment to which he would not otherwise have recourse. Of the various special services rendered by the hospital, the x-ray service probably has the greatest range of usefulness, for it may be called on to aid in the solution of problems in practically every field of medicine and surgery, including the specialties.

Efficient x-ray service is a necessity in the modern hospital. Too often, however, the x-ray department is used as a source of income for the hospital proper, although it is quite probable that excellent service at a moderate fee would prove of greater value in the end, as it would tend to attract additional patients to the hospital.

Department Demands Trained Specialist

It is impossible to place too much emphasis on the fact that none other than a graduate physician with special training in roentgenology is qualified to direct the various procedures which are employed in the modern x-ray department. The medical roentgenologist should have such complete mastery of this particular field of medicine that his colleagues will not hesitate to entrust their diagnostic puzzles to him. He must be studiously inclined, for advances in all phases of the work are being developed constantly, many questions await solution and the literature dealing with this specialty has become very extensive during recent years.

The work of the x-ray department comprises two equally important but distinct problems, (1) the diagnostic, which includes radiographic and fluoroscopic examinations and (2) the therapeutic, involving the treatment of a great variety of abnormal conditions ranging from ringworm of the scalp to plantar warts on the soles of the feet.

The x-ray is produced by passing a high voltage electric current through a specially constructed vacuum tube, the modern transformers designed for this work supplying current ranging upward from 50,000 volts. For the radiographic examination, a sensitive film similar to a photographic film is utilized, the portion of the patient's body to be examined being placed between the x-ray tube and the film. After subjection to the action of the x-ray for a certain time, the film is carried through a series of chemical processes similar to those employed in developing photographic films, at the completion of which the radiograph is ready for interpretation.

The fluoroscopic or screen examination takes advantage of the fact that the x-ray causes certain crystalline substances to fluoresce or glow, a phenomenon not unlike phosphorescence. After placing the patient between the x-ray tube and the fluorescent screen, the examiner must make a critical analysis of the normal and abnormal conditions presented.

Two Phases of X-ray Diagnosis

Of the two phases of x-ray diagnosis, namely, (1) the technical and (2) the interpretative, the latter is of far greater importance. The technical phase involves the production of radiographs or films and may be carried out under proper supervision by lay assistants or technicians. However, the interpretation of the normal and abnormal shadows seen on the radiograph or the fluorescent screen necessitates the translation of the abnormal shadows into terms of living pathology. It is manifestly impossible for anyone who does not have a thorough knowledge of the anatomy and physiology of the human body and the pathological processes which occur therein, to evaluate these shadows properly. The average physician is not able to make proper interpretation of x-ray shadows, as this is frequently difficult to do under the most favorable circumstances and little has been taught on this subject in medical schools until recent years. Probably

a justifiable criticism of the majority of these schools may be made, in that at the present time too little emphasis is placed on the value of the x-ray as a diagnostic aid.

All hospitals of fifty beds or thereabouts should have this important service under the direction of a physician who has devoted considerable special study to roentgenology. A number of the smaller hospitals have placed the x-ray service and the pathological laboratory under the direction of one physician on a full-time basis. When the volume of work is not large one radiologist may satisfactorily carry on the x-ray work in more than one institution, with the help of properly trained technical assistants, or he may give a portion of his time to the private practice of this specialty. In smaller communities where the demand for x-ray service is not great this work may be combined with some other specialty. The essential point is to have someone in each community who is willing and eager to give serious attention to it. This will entail postgraduate study at frequent intervals and considerable reading. In choosing the one who is to undertake the work on this basis the hospital should give preference to the younger men who is likely to remain in the community.

An Indispensable Need

EFFICIENT x-ray service is a necessity in the modern hospital. Too often, however, the x-ray department is used as a source of income for the hospital proper, although it is quite probable that excellent service at a moderate fee would prove of greater value in the end, as it would tend to attract more patients to the hospital. All hospitals of fifty beds or thereabouts should have this important service under the direction of a physician who has devoted considerable special study to roentgenology. A number of the smaller hospitals have placed the x-ray service and the pathological laboratory under the direction of one physician on a full-time basis.

Graduate Nurses as Assistants

The matter of assistants will present a different problem in each hospital. In general, graduate nurses make the best technical assistants, for they are accustomed to working under the direction of physicians and to the handling of patients. Gentleness and tact are necessary for the successful management of many patients, some of whom are quite apprehensive of the examination and fearful of the possible diagnostic disclosures. Graduate nurses are also less likely to assume responsibility for the interpretation of examinations not consistent with their knowledge. Often the x-ray technical work may be combined with other duties in the pathological laboratory or elsewhere in the hospital.

The x-ray department should be provided with well-ventilated, well-lighted quarters, sufficiently large to avoid undue crowding of apparatus. It should not be placed in the basement, as it is so often in smaller hospitals, but must be of easy access for out-patients and house patients alike, the best location being near the center of hospital activities close to the elevators.

Protection from Hazards of X-ray Work

It is not generally understood that x-ray work is a somewhat hazardous occupation, but anyone desiring information in this connection may secure it from any well-informed radiologist. One of the most important problems in the x-ray department is that of the proper protection of workers from the radiation. Special emphasis should be placed no this point, as the majority of hospitals are controlled by laymen who do not sufficiently appreciate the seriousness of the matter. Protection is provided to a large degree in modern apparatus by enclosing the tubes in lead-glass bowls or lead-lined boxes. However, other protective measures are necessary for the personnel, such as the wearing of rubber aprons and gloves, which contain lead, while making fluoroscopic examinations. An investigation should be made frequently and regularly to determine whether all possible factors of safety are being employed and to learn whether protection is complete.

Careful supervision of the general health of the workers should be observed by making routine examinations of the blood and blood pressure at least every two months. Every one employed in the department should be off duty at least one full day each week, and vacations of at least two weeks every six months should be provided. These measures, however, will be more or less futile if any considerable volume of work must be carried out under unhygienic conditions. Plenty of sunlight is as important as proper facilities for ventilation, neither of which is possible if the department is thrust into a dark basement.

A space of approximately 600 square feet is needed to distribute the apparatus to the best advantage, although more space is often desirable. There should be one room which can be shut off absolutely from external sources of light, as this is imperative for fluoroscopic examination. A second room should be available for carrying out the radiographic examinations. However, if absolutely necessary, because of limited space, all apparatus for screen and radiographic examinations may be placed in a single room by installing one of the combination fluoroscopic and radiographic tables which can be tilted from the horizontal to the vertical position. The majority of x-ray examinations can be made on such a table which, with attached tube stands, will occupy a minimum of space.

By using apparatus of this type, all that is essential can be crowded into a single room of approximately 150 square feet, provided there is a separate dark room. This is not advisable and should not be considered unless the amount of work to be done is comparatively small. Many patients are more or less nervous while undergoing x-ray examinations or treatments and for this reason, among others, it is best to eliminate the noise of the electrical apparatus by placing it in a separate room. As a protective measure for the operator the control devices should not be placed in the room where the x-ray tubes are in operation.

Separate Dark Room Important

The importance of having a separate dark room for the development and fixing of the films and the placing of films in their holders should not be overlooked. Scrupulous cleanliness and orderliness should be observed in the dark-room work. Space should also be provided for an office having sources of illumination for the examination of films, and for cabinets or other means of filing films and records, both of which should be arranged systematically. Toilet facilities and dressing rooms are also very essential.

Requisite Apparatus for Examinations

The requisite apparatus is that necessary for making all types of radiographic and fluoroscopic examinations. This will include one or more transformers, Coolidge tubes, tables, tube stands, Potter-Bucky diaphragm, devices for shifting tubes and films in the horizontal and vertical directions for stereoscopic radiography of the chest and other portions of the body, metal cassettes and other types of holders for films, illuminators, stereoscope, and developing room paraphernalia, including tank for developing, fixing and washing films, etc.

Glass plates have been replaced by films composed of a nitrate cellulose base which is coated on each side with gelatine impregnated with a silver salt. Recently a film with a cellulose acetate base has been developed to reduce the fire hazard to a minimum. Regulations for the handling and storing of x-ray films were published in the July, 1924 number of THE MODERN HOSPITAL, page 18.

Modern X-ray Technic

Probably the best modern x-ray technic is that in which the double-coated sensitive film is placed between two intensifying screens. These screens are relatively expensive but are essential when examining; (1) nervous patients or children, (2) certain thicker portions of the body, such as the lower spine and (3) moving organs, such as the heart or stomach. If the screens are handled with extreme care they will last for a considerable time and the decreased wear and tear on other apparatus will offset somewhat the initial high cost of the screens.

When considering the installation of x-ray apparatus, the various manufacturers and distributors should be freely consulted, so that the best available type may be selected.

Equipment Needed in the Department

The apparatus needed for equipping an x-ray department will vary with each particular hospital and will depend on the amount and type of work to be done. Satisfactory equipment for making x-ray examinations and for the treatment of skin diseases may be secured for about $3,000. This is included in list A. However, if the treatment of other conditions, such as tuberculous lymph nodes, certain types of goitre, fibroid tumors of the uterus, superficial cancers, etc., is contemplated, it will be necessary to secure a more powerful transformer which is also more expensive. (See list B.) Frequently it is not advisable or possible to bring patients who are already in the hospital to the x-ray department. For this reason a portable or mobile x-ray apparatus, which may be taken to the patient's bedside, is very valuable.

The following list is an approximation of the cost of the more essential pieces of apparatus.

	A	B
Transformer	$ 750	$1500
Tilt table	1000	1000
Coolidge tubes (2) at $125 each	250	250
Potter-Bucky diaphragm	250	250
Developing tank and accessories	75	100
Cassettes and screens	150	250
Stereoscope	125	175

Many of the smaller and less costly pieces of

(*Continued on page 316*)

THE HYDE BUILDING, STATE HOSPITAL NO. 1, FULTON, MISSOURI*

By SAMUEL W. HAMILTON, M.D., Director, Division on Hospital Srevice, National Committee for Mental Hygiene, New York, N. Y.

THE state of Missouri has, in recent years, been taking definite steps to raise the care of its mental patients to a higher level. One important measure was a construction program and the building at Fulton is an early evidence of progress toward adequate housing. It is a structure of pressed brick, two stories and basement high, of fairly good fire-resistant construction. It is light in color and pleasing to the eye. It stands on a terrace at a little distance from the main building and has a good outlook over the spacious and beautifully shaded front lawn. The center and one wing projecting at an obtuse angle have been completed at a cost of $100,000. It is expected that within a year or so operations will begin on the building of another wing that will make the building symmetrical.

Front view, Hyde building.

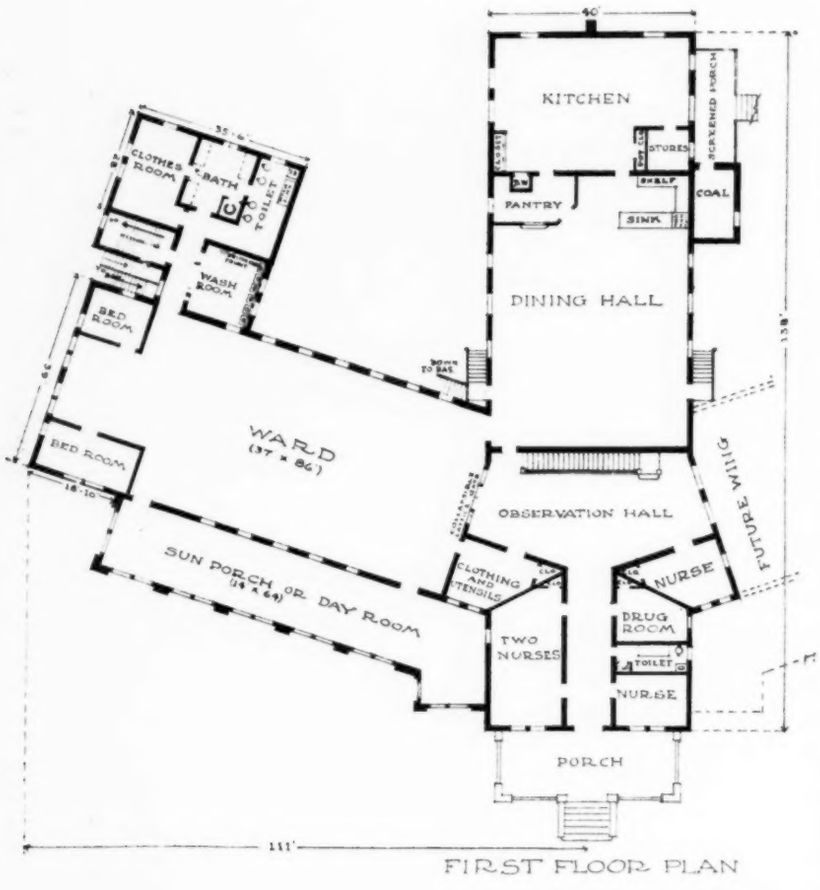
The shape of the building is not unusual and the disposition of its space is of interest to every hospital planner. The architect found problems due to a reduction by the general assembly of the appropriation requested; his solutions were, in many instances, happy but not always in accord with the best standards for a hospital for mental diseases. The building is to house quiet types of women patients, many of them employed. Its basement is for indoor industries.

One enters across a simple but pleasant porch. The rooms near the front entrance have been assigned to nurses. On the right is a single, on the left, a double room. As the partition between this room and an adjoining room bisects the obtuse angle formed by the wing and the center portion, this room is of irregular shape. It has two front windows and one at the side looking into the patients' enclosed porch. Behind the small room is a toilet. This toilet has an outside window that, unfortunately, will open onto the patients' sun porch, if the new wing is modeled on the same plan as the existing one. Behind the toilet is a trapezoid-shaped room with a door opening into the central corridor, and an outside window. Drugs and supplies are kept there. On the other side of the obtuse-angled partition is another room, intended for a nurse and to be occupied by one without much discomfort on the side of the unfinished wing, but on the finished side the room is impossible for occupation by an employee, since its only window looks into the patients' enclosed porch, and it is used now for the storage of patients' outer garments and for brooms and floor polishers. These interior rooms have vent flues extending above the roof, but there are some unventilated closets.

Nurses Quartered Off Central Hall

The central hall is large but rather dark. From

*The writer is grateful for Mr. T. B. Kidner's collaboration, and for many courtesies extended by Dr. M. O. Biggs, superintendent of State Hospital No. 1, during this study.



it is a stairway leading to the second floor. One result of quartering the nurses off this central hall is that any considerable noise in the center of the building is sure to disturb them, but the patients do not use the central stairway except at meal time; at other times, it is said, only a few employees are passing up and down. When the new wing is added, the stairs will hardly be used at all by patients, but they will possibly come through the central hall to get to the dining room.

Between the central hall and the ward, there is a partition with considerable glass, its transoms all immovable. Just beyond this is a huge sliding lattice door ("lazy tong"), so heavy that it is not always used by the nurse. Its purpose was to enable one to leave the doors into the central hall open for better ventilation without allowing patients to pass. It serves this purpose well, but its appearance is not altogether attractive. One now enters a large ward which, at the present time, on the first floor is used as a sitting room. In the right-hand wall are outside windows, on the left, a partition containing a number of windows opening onto the enclosed porch. Therefore the lighting of this large ward is not bad, and its ventilation satisfactory. As it is a large place in which to sit, cozy corners will be hard to develop. The lighting is none too good toward the left, along the wall near the inside windows, and it would be difficult for a woman of mature years to see well any fine work that she might be doing in her chair. The ceilings are sixteen feet high, and the air is pure and fairly cool even in summer.

It was intended that the enclosed porch serve as the day room, and that the large room should be merely a dormitory. That plan may be adopted when the other wing is added, but at present it is more convenient to use the entire second floor for dormitory purposes and the entire first floor for sitting rooms. At the far end of the dormitory are two comfortable rooms with inside as well as outside windows. The patient who is peevish or unhappy can go to one of these rooms and can sit or walk about and get rid of her bad temper without annoying other patients.

The sun porch, or day room, is attractive. It extends along the whole front of the ward, with a short extension or "return" on the central portion of the building. It was planned to place in this porch a huge wire guard extending to the ceiling and standing a foot or so from the windows, so that the patients would not have access to them or to the end of this porch. Wisely,

Central hall off which are the nurses' quarters.

however, this guard was omitted.

Arrangement of Rear Wing

From the far end of the ward the wing turns back at a right angle. On the left is an exit to a small porch whose roof is two stories above. This is the point of egress for the patients on both floors. Next to this is a stairway running from basement to second story, all enclosed and built of metal and cement. It is well constructed, but might be advantageously a little wider, so that, for instance, a stretcher could easily be carried up and downstairs. Even if intended only for residential purposes, one likes to have every building in such an institution so constructed that it can be turned into a hospital if the need arises. Behind this is a fine large clothes room with good installations. So many clothes rooms are pinched and cramped that the observer delights to see one that is big enough. Then comes the bath room with three tubs and a shower. The floor here is drained and the room is of generous proportions, so that it can be used with comfort. The shower bath spray head has been placed at an inordinate height, but a plumber can bring it down to the ideal level (five feet, six inches from the floor), so that it will throw its stream across the shoulder of the patient. In another corner of the building is the toilet room, with four seats, a slop sink, a wash sink and considerable free space. A little more privacy for the patients would be possible, though one recognizes that patients of this sort cannot well be allowed so great a degree of privacy as normal persons may enjoy. Next is a wash room which impresses the visitor at once as light, airy, and well planned.

It may be said at this point that the second floor is like the first. Over the center hall is a skylight and windows placed in the floor of the second story to light the hall below.

Dining room, elegantly equipped with stationary tables and chairs.

Large ward adjoining sun porch.

Equipment of Dining Room

To the rear of the central hall is a large dining room, ample in size, well-lighted and attractive. It has been elegantly equipped. Tables are all fixed to the floor and seats are attached to the legs in such a way that they fold and spring underneath the table when not in use. They are comfortable enough for a person who conforms to a standard pattern, but perhaps a little too close to the table for those of much girth. In one corner is a large sink where the dishes are washed, with plenty of shelf space near it. At the corresponding corner is the pantry.

Behind this dining room is a kitchen of generous size with the usual installations. At one end of the kitchen is a screened porch which serves also as a scullery. The storage room is in a corner of the kitchen with a window opening onto this porch. At this end of the porch is the entrance to the coal bin, a very convenient arrangement for minimizing labor and much preferable to that of storing the coal in a basement, as is the arrangement in many kitchens.

On the sun porch the radiators have been hung from the wall. It were better to use this same arrangement in the dormitories, for much dust gathers behind the legs of radiators. Ventilating shafts open near the top of the room. Sometimes the wind blows down through them—a defect which could be remedied by covering the outlets on the roof with one of the several devices now on the market for preventing a bad draft.

No janitor's closet has been provided. There is temptation to keep mops and brooms on the little back porch or in the hallway, just inside. As previously stated, the room near the central hall that was planned for a nurse is now devoted largely to

An enclosed sun porch to serve as a day room when the other wing is added.

the storage of floor polishers.

The upstairs dining room is at present used as a dormitory and will be until the second wing is added. A dumbwaiter has been provided. Rooms of different sizes now contain one, three, fourteen, thirty-two and thirty-six beds respectively, and a total of ninety-four patients are now housed in this building. When the second wing is added, the number originally planned for (200) will be accommodated.

Basement Devoted to Shops

The extensive basement has been devoted to the housing of the occupational therapy department. Its plan is not reproduced, because it presents no important features so far as internal arrangement is concerned. Partitions have been put up in temporary fashion to separate the various industries. There is a suitable toilet under the center of the building and if others are necessary they can easily be installed. The floors here are of cement.

This building has been planned to provide for the needs of patients who are perhaps as little difficult to care for as any in the institution. Those already quartered here seem quite comfortable. The usefulness of the building will be increased if in the wing to be added the spaces are somewhat more broken up, so that a greater number of these quiet patients will have a larger degree of privacy. A judicious use of wood, tile and terrazzo for floors in different parts of the building has brought the result that they are easy to clean at points where the most dirt might accumulate, and at the same time are comfortable to the feet where people most often stand and sit. The building will be useful and will be enjoyed by those who live in it.

X-RAY SERVICE IN THE SMALL HOSPITAL

(*Continued from page 312*)

apparatus do not appear on the list, as their purchase is an individual problem for each hospital. With the aid of a good mechanic and carpenter it is possible to develop numerous useful accessories.

The so-called deep therapy or high voltage apparatus should not be installed in small hospitals except in very exceptional cases. Producing currents ranging from 200,000 volts upward, it is capable of causing exceedingly harmful and dangerous results and at the present time it seems that the field of usefulness of this form of therapy is growing smaller. Under no circumstances should it be employed without the direct supervision of a radiologist who has had wide experience in the therapeutic problems of radiation.

ILLINOIS NURSING LEAGUE PLANS ANNUAL INSTITUTE TO BE HELD IN AUGUST

The Institute for Nurses, conducted under the auspices of the Illinois League of Nursing Education, has now become an annual activity of the league. Already plans are being formulated for the institute which will be held in Chicago during the last two weeks of August.

The Illinois Institute is two weeks in length and is planned for the busy graduate nurse who cannot give time to longer study. A short course of lectures on each subject is planned, so that the nurse can get a connected series on one subject. In this way she is able to get a brief survey of such subjects as psychology, principles of teaching, sociology and public speaking in a short time.

In order to be of value to the greater number of nurses, several courses, special lectures and demonstrations, will be offered so that the private duty nurse, the public health nurse, the administrator, and the instructor will find something of interest in her special field of nursing.

The city of Chicago offers many opportunities of an educational, scientific and cultural nature. The clinical material of the great hospitals of Chicago is available to all the nurses attending the institute. Excursions to these hospitals are systematically arranged, and demonstrations in teaching, and in new methods of treatment are given by experts in the different fields of nursing and hospital education.

The complete program will be ready for distribution April 15, 1925. Those desiring a program or any further information, may write to Miss May Kennedy, director of institute, 6400 Irving Park Blvd., Chicago, Ill.

BEHRENS TO REPRESENT A. H. A. AT GERMAN MEETING

Mr. P. W. Behrens, superintendent, Toledo Hospital, Toledo, Ohio, has been appointed by Mr. E. S. Gilmore, president, and trustees of the American Hospital Association, as a representative of the association to attend the meeting of the German Hospital Association which is to be held in Leipsic. A representative of the German Hospital Association is also being invited to the 1925 meeting of the American Hospital Association.

PRACTICAL APPLICATION OF SCIENTIFIC METHODS TO HOSPITAL ACCOUNTING

By G. G. HARRIS, and A. WEST, University of Alberta, Edmonton, Alta.

"THE basis of the system of hospital accounts now in general use has not been disturbed since its introduction in 1869—fifty-five years ago." This statement is from a paper read at the first annual conference of the Incorporated Association of Hospital Officers (England), in May of last year, by an official of a well-known English hospital.

While we in this country can neither substantiate nor contradict this statement, yet we do know that the information provided by the usual system of hospital accounts is confined mostly to the external transactions of the institution for the annual statement of accounts, and the accounts do not, generally speaking, give the information required for the internal administrative control.

Hospital work today does not consist solely of the actual treatment of the sick, for prevention and diagnosis have become increasingly important functions. A large number of hospitals have x-ray, physiotherapy, and laboratory departments, orthopedics and, in addition, a school for student nurses which, in many cases, is affiliated with a medical school. Also the research work done in hospitals today is of considerable magnitude. With such activities, the expenditure grows, and the need for internal control becomes of paramount importance, so that "an economy service to render maximum service at minimum cost" can best be maintained.

At this late date, with a more complete knowledge of accounting it is not necessary to explain in detail the inadequacy of the cash receipts and payments system as a basis for exercising administrative control. Too often we hear hospital executives say, with more or less pride,—"The system of accounting in use is of the simplest type," which usually means that only those records are kept which have been found to be necessary to prevent the institution from being engulfed in chaos. An accounting system is maintained, but the full benefit therefrom is not received, and therefore cannot be appreciated. The result is that the accounting system is relatively unimportant, instead of being the most essential and important means of internal administrative control. The value of the accounting system lies in its value in increasing the efficiency of the administration.

It is true that a large proportion of our hospitals keep their accounts on a correct income and expenditure basis. The total expenditures are added together, possibly with subheadings such as "Domestic," "Professional Care of Patients," "Administration Charges," and the total expenditures divided by the number of days, thereby giving the gross cost per patient per day. It is this method of arriving at the cost per day which is neither correct nor scientific. This method leads to too many wrong conclusions, drawn by the public, which should be vitally interested in hospital service and in hospital costs since, in the end, it is the people who "pay the piper." For instance, there has recently been a controversy in a local paper over the expenditures of a certain city hospital, during which time figures were introduced showing comparisons of the costs per day of various other hospitals in the state. There is no doubt but that these costs were arrived at by the method indicated above—total expenditure divided by hospital days. Hospital officials know that these comparisons are of no value. There are such wide differences between services rendered, the equipment available, and the professional care given in various institutions, that this basis of comparison is absurd. Yet up to date, the gross cost per patient per day seems to be the universal unit for comparative purposes.

Simplest Type of Accounting Often Valueless

"TOO often we hear hospital executives say, with more or less pride, 'The system of accounting in use in our hospital is of the simplest type,' which usually means that only those records are kept which have been found to be necessary to prevent the institution from being engulfed in chaos. An accounting system is maintained, but the full benefit therefrom is not received and therefore cannot be appreciated. The result is that the accounting system is relatively unimportant, instead of being the most essential and important means of internal administrative control."

The units of cost cannot give a clear conception of the facts except when these units are based on the nature of the particular service rendered. By way of explanation, the gross cost per patient per day in a given institution, secured as previously indicated, throws very little light upon its activities and the cost of these activities, but we get facts capable of comparison that tell the story vividly and accurately, when the units of cost are explicit, and are based on the following:

Maintenance of patients, per bed
X-ray, per examination
Operating room, per operation
Massage, treatment
Pathological laboratory, per examination
Diagnostic clinic, per examination
Laundry, per unit of stated piece
Dining room, per ordinary meal
and so on.

Application of Information

The putting into practice of this procedure does not necessarily mean the wholesale slaughter of present methods, but is only the proper application of the information, which is in most cases, readily available. That accounting is a vital factor in hospital administration needs no emphasis. Development along the lines mentioned would, of itself, be worth while, because of the more efficient control of finances, but coupled with this development would be the increased facility in presenting the services rendered, and the costs of such services, in statement form.

The clearer the presentation of the activities and the expenditures, the better understanding will those interested have of the accomplishments and aspirations of the modern hospital, and in this, the public is vitally concerned as future patients, taxpayers, or donors.

The Presbyterian Hospital
OF THE CITY OF CHICAGO
This Certifies that CHARLES RAYMOND WEST (8 LBS. 7 OZS.)
was born in The Presbyterian Hospital of the City of Chicago
on the SIXTH day of FEBRUARY A. D. 1925.
In Witness Whereof the said Hospital has caused this Certificate to be signed by its duly authorized officer and its Corporate Seal to be hereunto affixed.
Asa Bacon
Superintendent

A replica of the form of birth certificate which is now being issued by the Presbyterian Hospital, Chicago, Ill., to every baby born in the institution. A special feature of this new form of certificate is the inclusion of the baby's footprints.

CLINICAL THERMOMETER BILL PASSES SENATE

The bill regulating traffic in clinical thermometers has passed the U. S. Senate. This bill, it will be remembered, provides for standardization of clinical thermometers through the U. S. Bureau of Standards, and thus eliminates inaccurate thermometers and, in a measure, safeguards human life. The measure provides that inspections, tests, or certifications shall be performed by government authorities, and a reasonable fee charged to make the work self-sustaining. Regulations will be issued under the authority of Secretary of Commerce which will include "specifications, reasonable tolerance or permissible variations which may be allowed and also requirements for designating marks to be placed on the thermometers as may be deemed necessary."

The bill provides that thermometers may not be introduced into any state or territory or from any foreign country unless the thermometer has been marked or certified in accordance with the provisions of the bill. It is understood that manufacturers and dealers generally favor the passage of the measure. Among other reasons advanced for the passage of the bill are that clinical thermometers as now used by physicians and hospitals may be purchased at prices ranging from $16 to $18 a gross to prices above $100 a gross. It is claimed that unreliable thermometers known as culls are offered for sale. It is stated further that thermometers cannot be accurately tested without the maintenance of an expensive plant for that purpose or without submitting the thermometers to the Bureau of Standards for test.

THE REVOLT AGAINST HEALTH HABITS

I wish I was a gold fish
Who hasn't any mind—
I'd grin from gill to gill before
And wag my tail behind.

I wouldn't have a nose at all
So wouldn't have to blow it,
And if I blushed nobody'd know
Because I wouldn't show it.

I wouldn't have to comb my hair
Nor clean my teeth or nails
The only job I'd have to do
Is finicure my tails.

—The *Literary Digest.*

OPPOSITION TO AUTOPSIES DECREASING

The annual report of the Zamboanga General Hospital, a sixty-bed hospital in the Philippine Islands is of interest, particularly with respect to the decreasing opposition of the natives toward autopsies. This opposition has been overcome to the extent that out of a total of 122 deaths in the hospital, sixty-six, or 71 per cent, of the cases were necropsy cases. There were 814 cases of communicable disease admitted, hookworm heading the list with 403 cases.

PHYSICAL ASPECTS OF HOSPITAL RECORDS*

By CLARENCE L. NEU, B. A., President, Physicians' Record Company, Chicago, Ill.

WHEN the hospital buys gauze or foodstuffs or linens it makes a very careful selection. It specifies quality and demands that the specifications be lived up to. Curiously enough, when the hospital buys printed matter it usually takes what the producer chooses to give it. This apparent inconsistency is the outcome of a somewhat limited knowledge of the elements which enter into the printed form.

In preparing a record form, an office form or, in fact, any piece of printed matter, there is practically only one consideration on the part of the hospital administrator and that is the text, or the "copy" to be printed. This discussion will deal with an entirely different aspect of the printed form. We shall talk about the physical make-up of the record. We shall discuss questions of paper stock, standardized sizes, typography and the various mechanical details which enter into the production of printed matter. Reference to the content of the record form will be studiously avoided.

It is not essential, of course, that the one doing the hospital purchasing should burden himself with the mass of technical details involved in the production of his printed record forms, but an understanding of some of the fundamentals will make for more intelligent preparation and purchase of the material.

What Paper Shall We Use?

The matter of kinds and grades of paper stock is a dim and hazy subject to most people. Because of the immense volume of printed records and office forms used in hospitals it is logical that the hospital buyer should know, at least, the difference between the various kinds of paper. The requirements of the hospital in the matter of paper are rather limited. For practical purposes we may say that all of the needs of the hospital may be supplied through the use of four kinds of paper stock, namely, bond paper, ledger paper, index bristol and book paper.

A few definitions from the "Handbook of Quality-Standard Papers," issued by the American Writing Paper Mills, will present the distinguishing features of these four kinds of paper stock.

Bond is a term applied to a strong and rattly, more or less translucent paper with a hard surface, made of rag or sulphite or both.

Ledger is a strong paper, usually heavy, with a smooth dull finish, and possessing good erasure qualities, used for accounting books.

Index bristol is a strong bristol board used for index cards and similar records.

Book paper is a general term used to indicate a class of papers used for books, catalogues and the like, as distinct from writings, ledgers, etc.

These definitions, while giving no technical details as to the composition of the several kinds, point out the important feature of each stock. With these essential features in mind, let us indicate by a chart the proper stock for the various classes of records and forms.

Occasionally a few other kinds of paper enter into the hospital's requirements but these cases arise so infrequently that we shall content ourselves with merely naming some of them. Document and envelope manilas are sometimes required for folders and envelopes; cover papers are needed for some booklets and catalogs, protective papers are used for vouchers and checks. To describe each in detail would complicate matters and would defeat our purpose of presenting a large view of the subject as applied to hospital work.

Permanent and Temporary Records

Most of the hospital's printed records and forms are made up on bond paper and rightly so. We shall, therefore, go more into detail regarding this particular kind of paper. There are over one hundred grades of bond, each with its own watermark and its own characteristics which may vary slightly from every other grade. Obviously, such a wide variety is unnecessary and without justification. The Federal Government realized this and during the war set in motion certain standardization measures, probably with only one object in mind, the conservation of certain raw materials. One paper making concern, the largest producers of fine papers in the world, has, however, carried the standardization measures to a conclusion.

Bond papers of nine grades, this paper mill's investigations show, cover all of the known needs of any organization. This determination is based upon a very important classification of forms. Every piece of printed matter is intended either as a permanent, a semi-permanent or a temporary record. Granting this assumption the nine grades of bond decided on fill every requirement.

What do we look for in determining the grade of a bond paper? Four factors enter in: appearance, long life, printing qualities and probable handling. These factors in turn depend upon the texture of the paper. Bond papers with the high-

*This is the second article on the record room, prepared by Mr. Neu, for THE MODERN HOSPITAL. The first article appeared in our March issue, page 233.

Bond Paper	Ledger Paper	Index Bristol	Book Paper
Used for Forms for professional service Administrative Purchase and issuance Business office Training school Social service Dispensary Library Analysis of activities Stationery	Used for Accounting forms Bound books, as registers, operating room books, record of births, delivery room books, etc.	Used for Card forms for business office, training school, ledgers, admission records, cross indices, library forms, etc.	Used for Annual reports Training school catalogues Publicity matter

est rag content have the greatest strength, the best appearance and writing qualities. As the rag content decreases, the paper loses in strength, appearance and writing qualities. Papers in which sulphite takes the place of the rag content are the least durable and are the cheapest in price.

Let us apply this information to the hospital's problems. All of the institutional printed matter may be classified into permanent, semi-permanent and temporary. They are seldom thought of in this manner, but the classification may well be accepted by administrators with a view to putting the records on a more efficient basis. It is a simple matter for the hospital executive to decide whether a record is temporary or permanent or semi-permanent and to choose his paper stock accordingly. A requisition for repairs, for instance, may be considered as a temporary form. It is discarded after a short period. A form of this kind may be printed on a cheap sulphite bond. Purchase orders may be considered semi-permanent and a bond of at least fair quality with some rag content should be specified. The graphic chart, a most important part of the case record, is kept for long periods, sometimes indefinitely. It must be considered as a permanent record. A high grade of bond is indicated.

We are not unaware that a very important economic factor, the question of price, enters into this whole matter. The forced policy of large numbers of institutions is to buy printed records and other forms at the lowest possible price. Holding to this policy has made it impossible to assert much choice in the matter of quality. The logic of the proper classification of forms is sound, however, and is an end toward which every institution should strive.

Classify Forms According to Permanency

In the chart which follows we have classified under the proper headings a number of the common hospital forms which may be printed on bond papers. The list, of course, is incomplete. Several hundreds of forms could be so classified.

It is noticeable, from an examination of large numbers of hospital forms, that in the matter of

Hospital Forms Printed On Bond Paper

Permanent	Semi-Permanent	Temporary
Patients ledger card Dept. inventory card Narcotic card Admission card Permit for operation Permissions for autopsy Cross index cards Top sheet Personal history Standing orders Graphic chart Operative record Laboratory reports X-Ray reports Training school application Training school summary Monthly financial report Analysis of hosp. activity	Receipt blanks Petty cash memos. Report, admis. and disch. Guarantee of payment Bill head Purchase order Patients clothes list Accident report Patients release Ward census Bedside notes Training school case reports Daily report to supt.	Daily reports, spec. chgs. Quotation sheet Internal requisition Prescription blanks Diet orders Laundry lists Menu list Ambulance slip Condition sheet Internal transfer Phone call slip Visitors pass Time off duty Requisition for repairs

case records, "charts" as they are often called, there is a distinct movement toward the adoption of the 8½x11 size. Organizations such as the American Hospital Association and the American College of Surgeons which have suggested series of forms for hospital use have decided upon the 8½x11 size for the professional service records and many others. It is a logical step, because this size cuts economically out of full size sheets and because it is a size accommodated by standard filing devices.

Select Sizes with Care

There are, of course, many forms used in a hospital, especially those required in the office and purchase and issuance departments, which must be either larger or smaller than 8½x11 to accommodate the necessary material. In these cases, in the interests of economy, care should be taken to select sizes which will cut out of full sheets without waste. It may be necessary to seek advice on these matters before going ahead. Obviously it would be impossible to set down here the possible sizes of sheets which might be cut out of the various full size sheets which the paper mills furnish. This list would be long and confusing.

Index cards should never vary from the four standard sizes for which standard filing devices are made. These are:

3x5 4x6 5x8 8x5

Accounting forms which fit into loose leaf binders may be made in a number of standard sizes. In outlining any new loose leaf forms the size should never be left to a random guess. The nearest standard size should be decided upon and the material made to fit. There is a wide range of standard sizes for which loose leaf binders are made and we list here a number of the most generally used. A good point to remember is that in giving dimensions of loose leaf forms, the binding side is given first, as:

6 x 9½	9¼x11	9½x14
7½x10⅜	9¼x11⅞	11 x14
8½x11	9½x12	11 x17
8½x14		14 x17

In our discussion of standardized sizes of forms we have always kept in mind the standard filing devices and loose leaf appliances which may be obtained from stock. Special sizes necessitate special appliances which, of course, cost several times what stock material costs. A survey of your forms with these points in mind may suggest some changes which will result in a saving.

A Few Suggestions on Typography

The selection of the type styles is a matter seldom considered by the purchaser of hospital forms. It is left to the producer who uses his own judgment or uses no judgment at all. It has been our lot to see case record forms set up in type fit for a church calendar and to see publicity material unattractively set in common Gothics which belong on cross indexes, ledger sheets, and other severe records.

It is possible to bring this matter of typography out of chaos and to establish some uniformity in the appearance of the printed matter. For instance, there is no reason why a single face of type cannot be decided on for all of the case record sheets, another for the index cards, another for office and administrative forms, and so on. The selection of type is not simply a matter of appearance. Efficiency enters in. On index records, such as admission cards, for example, a somewhat condensed, readable, small type should be selected to permit of the greatest possible space for writing. The small size of an index card, 5x8 maximum, necessitates the display of judgment.

Choosing a Distinctive Type Face

Selection of a distinctive type style for the name of the hospital should receive some consideration. It is a good plan to choose a definite type face for the hospital name. It should appear on every form and on every piece of publicity. It will become known just as a newspaper title is known and unquestionably, if an attractive choice is made, it will have publicity value.

In this brief exposition we have attempted to present some of the important facts pertaining to the physical make-up of hospital records and other printed matter. We have brought out points which our experience of many years indicates are seldom if ever considered by the purchaser of printing. The hospital executive probably has not the time to attend to the numerous details which enter into the production of forms, but the fact that hundreds of thousands of dollars are spent by the hospitals year after year for record material and publicity matter warrants at least a greater consideration of the larger factors which we have brought out in these paragraphs.

To summarize briefly, we would urge the classification of all printed forms into permanent, semi-permanent and temporary, selecting the proper grades of paper to fit the case. We would suggest greater attention to the standardization of sizes of forms in the interests of economy and efficiency. We would point out the desirability of selecting type faces which make better records or which will make more attractive publicity material.

—Underwood & Underwood.

Professor J. Bergonie, Bordeaux France, who died recently after months of suffering due to the effects of x-rays during experiments to find a cure for cancer.

THE ADMINISTRATION BUILDING OF THE NEW READING HOSPITAL

By RITCHER & EILER, Architects, Reading, Pa., and S. S. GOLDWATER, M.D., Consultant, New York, N. Y.

ON A commanding plateau in West Reading, Pennsylvania, a little more than a mile from the center of the city of Reading, the new buildings of the Reading Hospital are advancing toward completion.

The program provides for the erection of a general hospital with a present capacity of approximately 300 beds, to be expanded in the future to 500 beds or more. Such a program requires generous planning of the administrative center of the hospital, and suggests the development of a type of ward or patients' building which may be adapted to changing needs, for the assumption is that as the hospital expands, space originally assigned to one class of patients may be absorbed by other groups.

Drawing of the Reading Hospital, West Reading, Pa., showing arrangement of buildings.

An intimate description of the ward, semi-private, and private patients' units is reserved for presentation in a later article. The present article will deal more particularly with the administration building, which is something more than its name implies, since it is not merely the headquarters of the hospital's administrative staff, but is the diagnostic and therapeutic workshop of the entire institution. In the accompanying plot plan, the administration building is designated Building C. The long axis of the building extends from east to west, and the building is approached from the north by way of Sixth Avenue. Spruce Street marks the northern boundary of the hospital property.

Flanking the main entrance to the hospital grounds stand the residences of the superintendent and chief engineer. Entering the gateway formed by these two buildings from the main entrance road (a continuation of Sixth Avenue), one passes the site of the future nurses' home, situated on the left side of the driveway; the corresponding site on the right is reserved for future clinical units. Directly in front of the administration building is a wide parking space, with a grass plot in the center.

Main Building Commands Wide View

The administration building comprises five stories, including the ground floor. On the north or entrance side the ground floor extends only a few feet above the level of the parking space which crowns the plateau, just below the level of the first story. South of the administration building the land falls away rapidly, leaving the ground floor of the administration building well exposed, and fit for almost any use. The view from the administration building, both north and south, is quite unobstructed; the view toward the south is particularly imposing, embracing the crests of encircling hills beyond a near by valley.

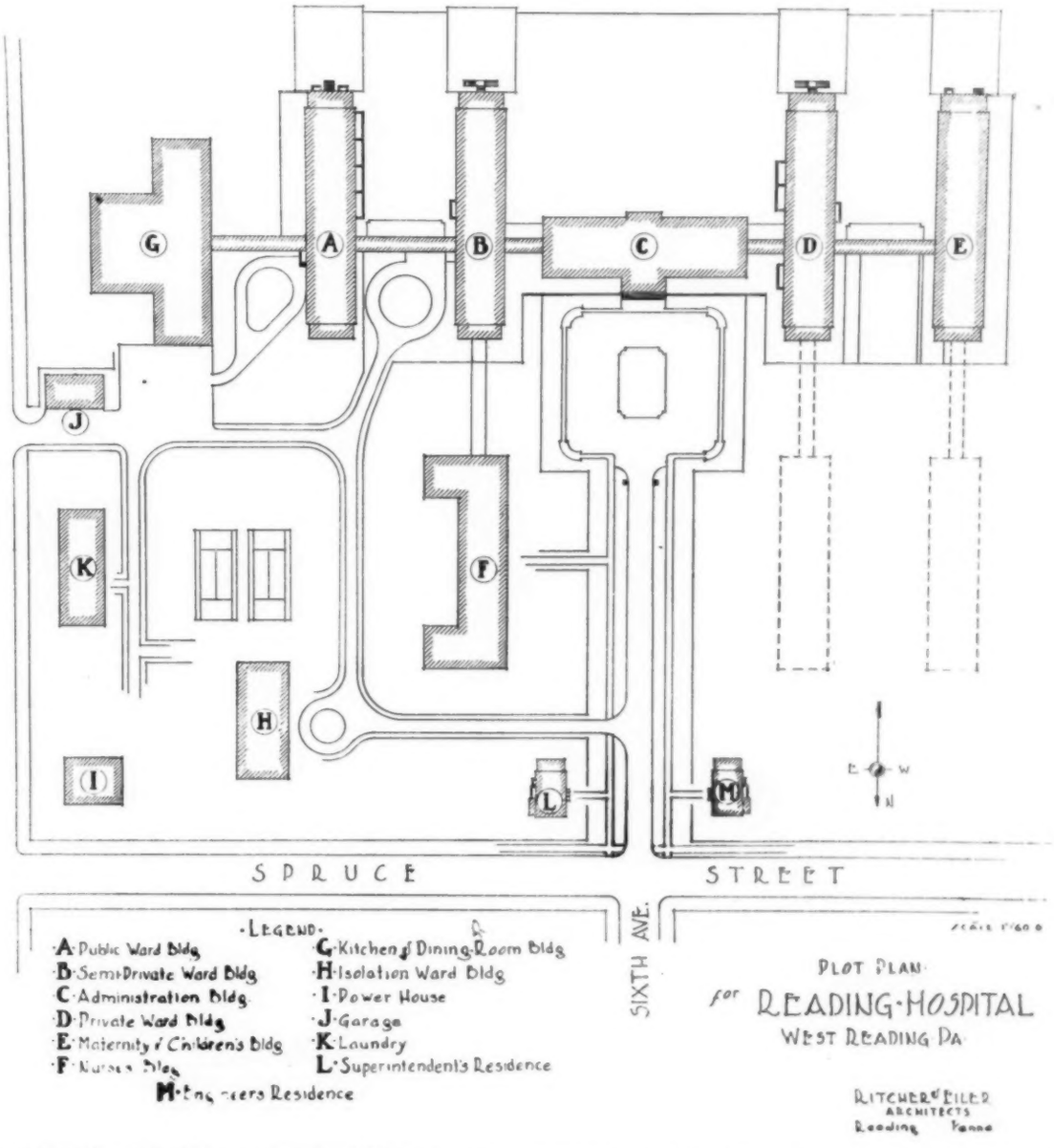
A glance at the plot plan will show that the main connecting corridor of the hospital, starting from the service building, G, at the left, penetrates in succession the public ward building, the semi-private ward building, the administration building (the architectural center of the group), and the private patients' building, terminating at Building E, designed for the temporary use of the maternity and children's departments, but eventually for the exclusive occupancy of the maternity service. Attached to the southerly side of the connecting corridor are broad verandahs, each section within easy reach of an adjacent clinical unit.

As the general scheme can hardly be understood without reference to the floor plans of the patients' buildings, we present herewith the typical floor plan of the semi-private building. This building will be described in detail hereafter, but attention is directed now to the manner in which the central corridor of the hospital penetrates the ward building. In immediate contact with this

penetrating corridor are the stair well, the day room, the nurses' station, and the elevators. The crossing or ward corridor is broken by doors so placed as to cut off the connecting corridor, the stairway and the elevators from the parts of the ward which are occupied by patients; hence traffic passing across and through the ward buildings need not disturb any patient.

beyond the lobby is a commodious reception room overlooking the park to the south.

From the central lobby, visitors for the wards pass to the left, those seeking private rooms to the right. Medical visitors on their way to laboratory departments, conference rooms, diagnostic and treatment rooms, operating rooms, etc., on other floors of the administration building, have direct



In planning the administration building, importance was attached to (a) its relation to the other buildings of the group, (b) the formulation and execution of a comprehensive diagnostic and therapeutic program, (c) arranging the contents of the building in a convenient manner.

The public entrance to the administration building is on the first floor. The large lobby which has been treated in a manner commensurate with the importance of the great future hospital, extends through two stories. Beaccess to all these departments by means of a central elevator.

At the left of the main lobby are the business offices. Here are found, in the order named, an alcove for those who have business to transact with the cashier, the cashier's office, the office of the chief accountant, and the general business office. Glazed partitions separate these rooms, and the whole group is under the eye of the chief accountant. Locker and rest rooms for male and female office employees are near by. There are

four sets of toilets and lavatories on this floor, two for public use and two for the medical and administrative staffs.

Future Needs Planned For

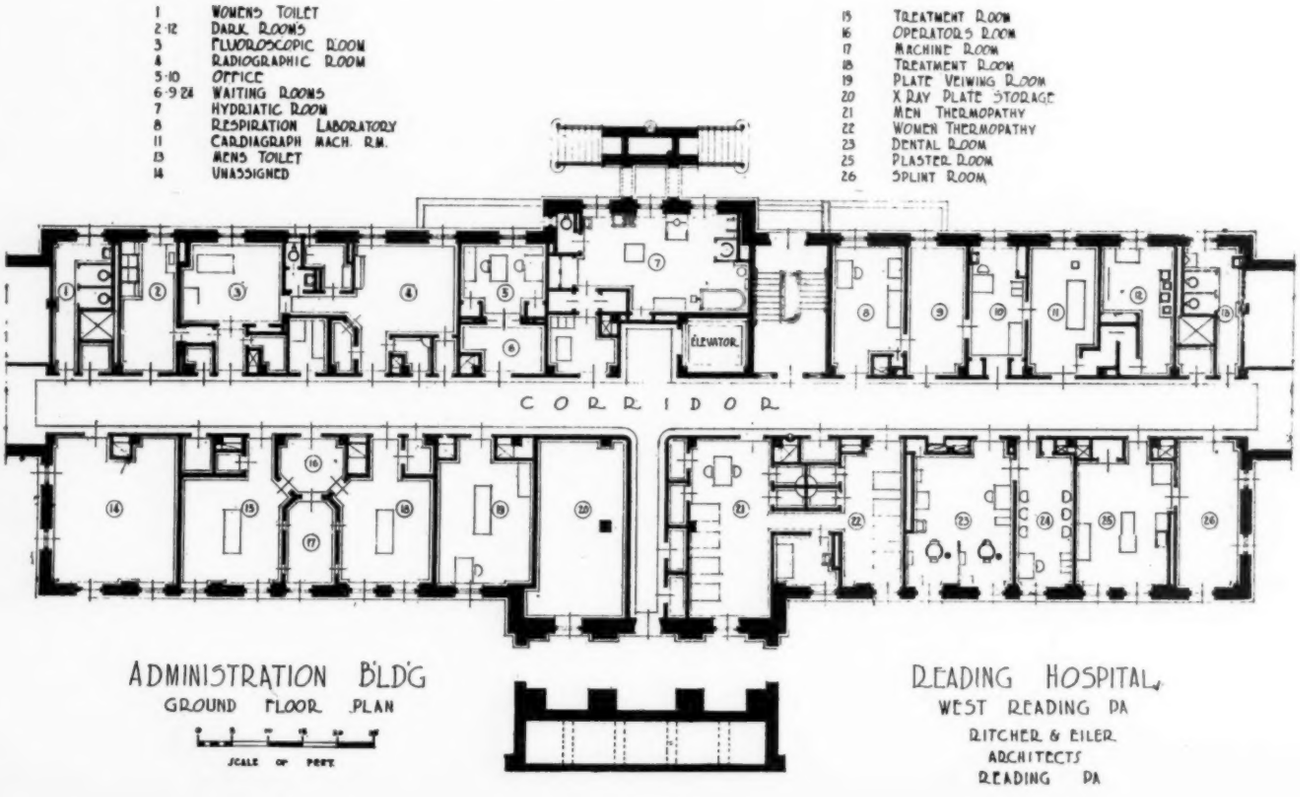
To the right of the main lobby is the information desk and the telephone central. The relation of these rooms to each other, to the central lobby, and to the executive offices has been studied with particular care. Adjoining the office of the information clerk is that of the assistant superintendent, or "officer of the day." There follow the private office of the superintendent of nurses, the business office of the training school, a room for supervisors and instructors, the private office of the superintendent of the hospital, with secretary's anteroom. Opposite the executive offices are the locker rooms, rest room, and consultation room of the staff, and balancing these rooms at the other end of the building are two social service rooms, a waiting room for patients applying for admission, an office for the admitting physician, and an examining room (with dark room adjoining). The receiving ward is not far away; it occupies the ground floor of Building B, which adjoins the administration building on the east. Emergency cases arriving by ambulance will be admitted immediately to the admitting or receiving ward. In considering the arrangement and capacity of the first floor of the administration building, the reader should remember that the plan is related to the needs of the future hospital of from 500 to 600 beds.

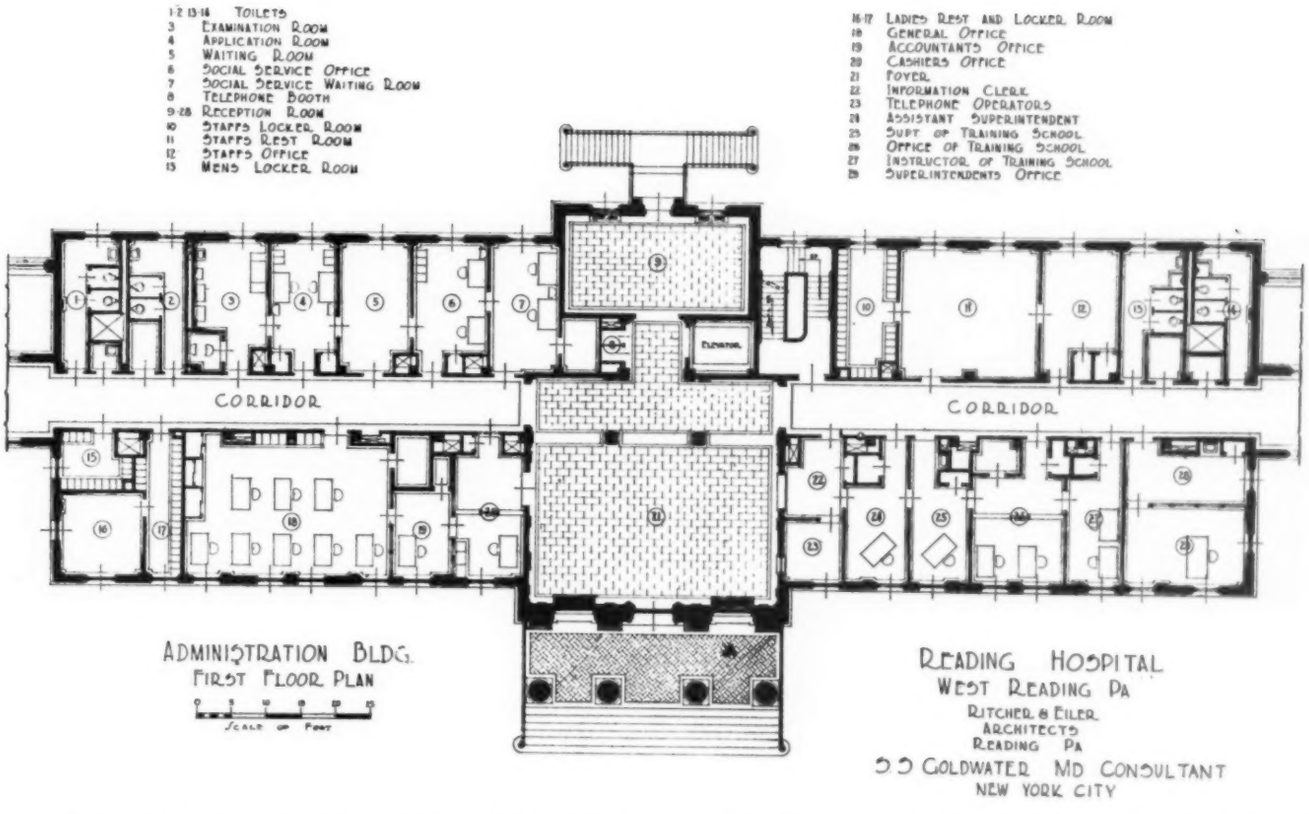
The ground floor of the administration building is designed for less public uses than the first floor. It is on a level with and in close proximity to the receiving ward, occupying the ground floor of Building B (see plot plan) and the out-patient department, occupying the ground floor of Building D. These relations are important, because the ground floor of the administration building contains diagnostic and therapeutic departments which will serve both hospital and dispensary. From the dispensary, patients may be taken into the ground floor of the administration building without passing through any ward unit; moreover, the arrangement of the entire hospital is such that patients from any room or ward may be brought to the same destination without unpleasant exposure or contact either in the out-patient department or elsewhere.

The extremely important central ground floor space which we are now describing has been assigned to the following departments: (1) x-ray department, including radiography and radiotherapy, (2) hydrotherapy, (3) respiration laboratory, (4) cardiographic laboratory, (5) thermotherapy, electrotherapy, and massage, (6) dentistry, (7) plaster room, (8) splint room. Few hospitals command facilities equal to those which will eventually be concentrated on this floor.

What Laboratory Group Comprises

The second story of the administration build-





ing is deprived somewhat of usable floor space through the extension into this story of the upper part of the main lobby. In the rear center is the board room. The major sections of this floor have been assigned, respectively, to the laboratories at the left, and to library, record room, and conference room at the right. Toilet and locker rooms for both sexes are close at hand. In the laboratory group are the serological laboratory, sterilizing and media room, bacteriological laboratory, research laboratory, small animal room with ventilated anteroom, chemical laboratory, supply room, balance room, titration and distillation room, pathological laboratory, departmental office, museum, clinical photographic room and dark room.

On reviewing the contents of this floor, the significance of the location of the administration building once more becomes apparent. Here, on the second floor of the central building of the hospital group, are what may be termed the scientific headquarters of the hospital. The location of the laboratories insures frequent and stimulating contact between the laboratory and clinical staffs. The staff meeting room, where clinical conferences will be held, is in a location to which patients can be brought with a minimum of discomfort. The clinical record and file room, connecting with and adjoining the library, are accessible and can be readily supervised by a single person; here, in peace and quiet, members of the staff may review the medical literature of the day, or may compile data from the clinical archives of the hospital.

Third Floor Is Surgical Center

The third floor of the administration building is the hospital's surgical center. North of the main corridor in this building six operating rooms of moderate size are symmetrically grouped in pairs. Ample natural lighting has been provided for the two outer pairs of rooms, which are intended for general surgical uses; the pair at the left are to be used for surgical cases brought from the ward side, while that at the right will undoubtedly be utilized for private patients brought from the opposite side. The first rooms reached by patients undergoing transportation to the operating rooms are the anesthesia rooms; the proximity of these to the operating rooms which they respectively serve, will be observed. Between each pair of operating rooms a scrub-up room and a sterilizing room are provided; in the latter are double sets of instrument sterilizers. Back of the portico, in the center of the building, are two operating rooms designed for eye, ear, nose, and throat work; for these, naturally, no top light has been provided.

It is the intention of the hospital to encourage the attendance, at surgical operations, of the medical practitioners of the neighborhood; and for the comfort of such observers, as well as for the purpose of preserving the aseptic integrity of the operating rooms, observation platforms with side

entrances have been provided in connection with two of the principal operating rooms; as an additional safety measure, adjustable glass screens have been placed between the lower parts of the observers' platform sections and the operating rooms proper.

The rooms on the south side of the corridor, directly opposite the operating rooms just described, consist in the main of service and comfort rooms, with the exception of the room marked "7" on the floor plan, which will be equipped for urological work. In this series are toilet rooms for patients and visitors, dressing and locker rooms for the visiting and resident medical staff and for the nursing staff, an office for the supervising nurse, a room for the sterilization of dressings, a nurses' work room for the preparation of supplies, and an apparatus room.

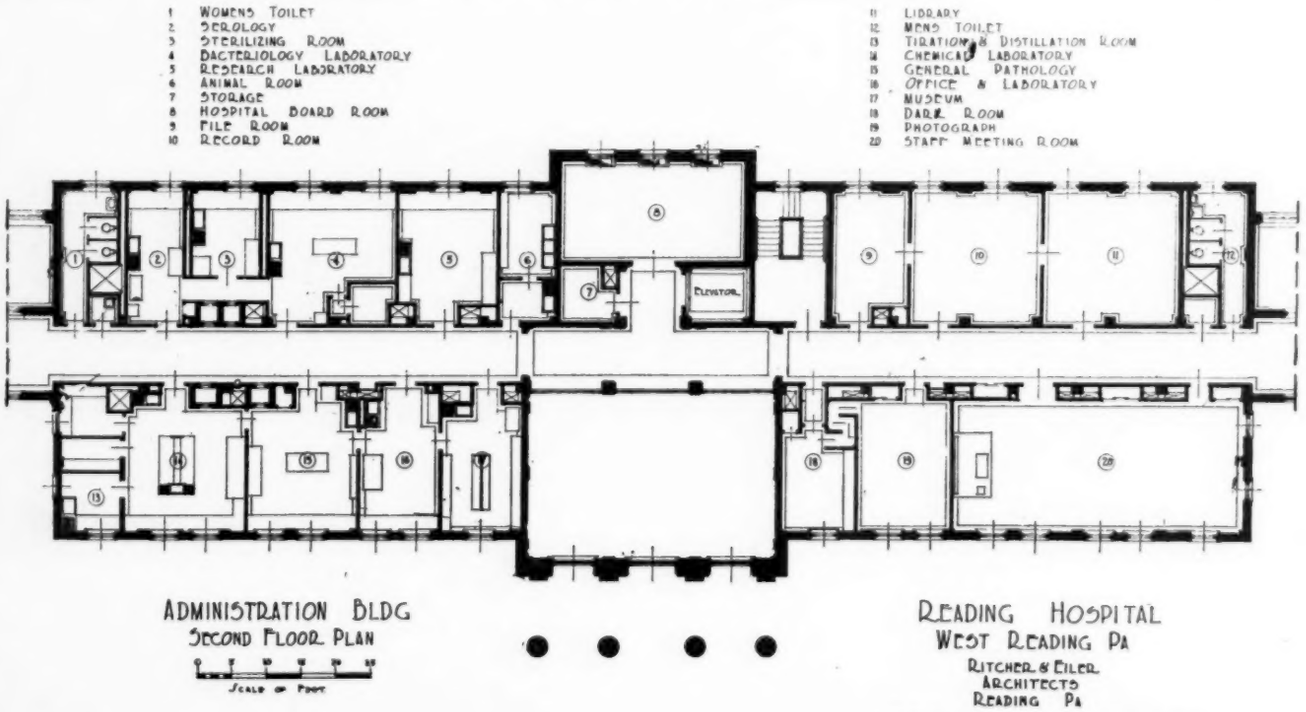
Staff Generously Provided For

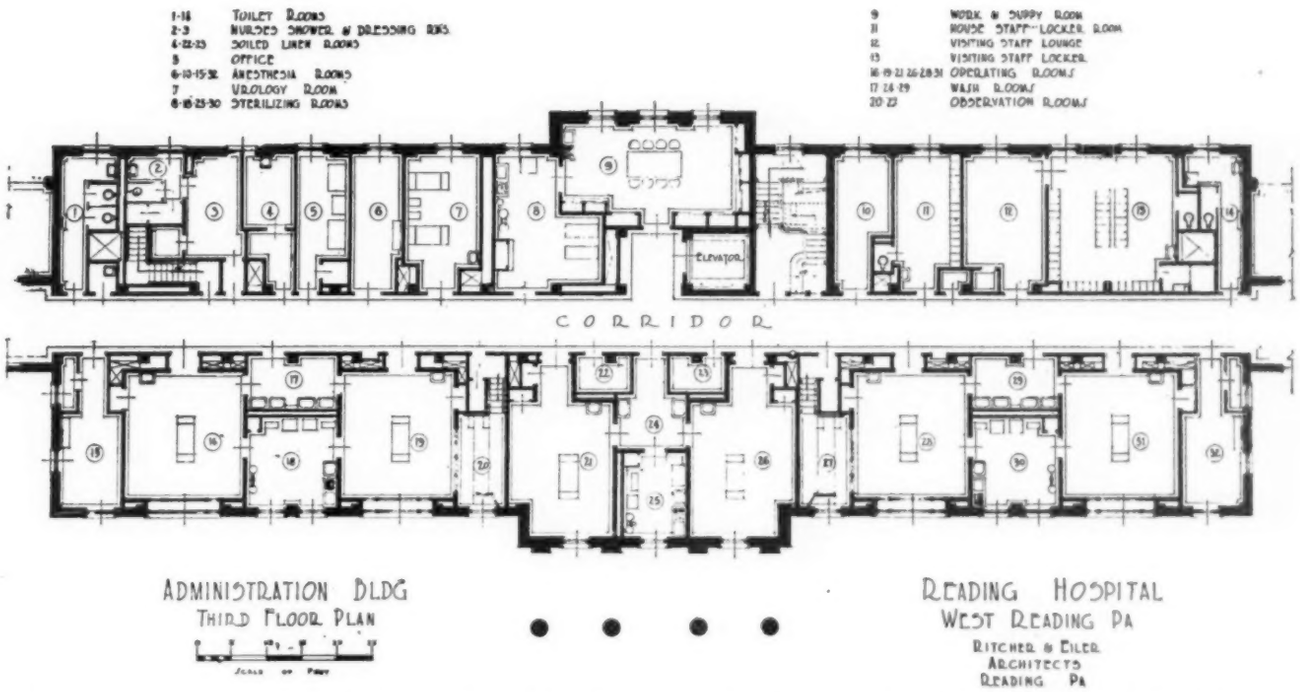
The fourth floor of this building, which is quite remote from any section of the building occupied by patients, is the happy hunting ground of the resident staff. The accommodations provided here include individual bedrooms, showers, toilets and lavatories in ample number, trunk room, linen room, and a general living room placed centrally in the projecting part of the floor, overlooking the hospital grounds and the distant hills.

A casual glance at the plot plan suggests that the administration building is penetrated by the only corridor which connects the various hospital buildings. It must not be inferred from this that any inconvenience will be experienced, for, as a matter of fact, the principal service corridor, which extends from the kitchen at one end of the group to the opposite extremity of the hospital, is a story below the administration building's ground floor. This low-lying corridor taps all of the service elevator shafts, and is, moreover, on a level with the kitchen itself (which occupies lower ground than the central hospital building), with various workshops and storerooms, and with the morgue and autopsy room. Without such a corridor, the location of the administration building, as planned, would be untenable.

Tower Will Be Landmark

There was no attempt at extravagance in design, but rather an effort was made to obtain a pleasing combination and for that reason Georgian Colonial was selected as a type which seemed to be very appropriate for the location, as well as to the grouping of the buildings. Interest was centered on the entrance, with the colonial tower rising 150 feet above. The tower will contain an illuminated four-face clock. The tower roof will be covered with gold leaf and surmounted by a powerful beacon light so that it will be a widely visible landmark, both by day and night. The tower, an unusual feature of recent hospital planning, was required by the terms of the building program; it was the opinion of the building committee that this was an appropriate feature, tending to enhance the beauty and dignity of an institution which is destined for genera-



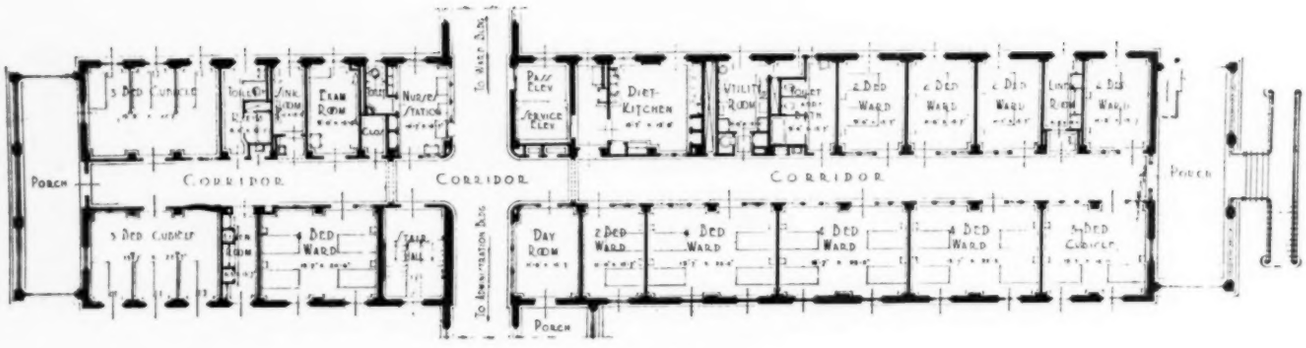


tions to occupy a central place in the life of a great community. Upon this theory, the necessary outlay seemed to the committee to be warranted and the architects were instructed to proceed accordingly.

The building rests on rock and is of steel frame construction, fireproofed with concrete. This type of construction was selected due to the speed at which it could be erected. All outside walls are curtain walls, built of hollow tile with brick facing bonded to the tile backing. Grey Indiana limestone was used for the base and all other exterior trim. Steel roof rafters were used throughout, with a reinforced concrete slot covered with variegated stone slate in random widths and thickness. Interior partition work is of two-inch metal lath and plaster, except in the ground floor, where hollow tile is used. Every piece of material used in the construction of the building is first-class. The high initial cost of this was duly considered, but it was believed that this policy would prove the cheapest in the end, since it would minimize maintenance and depreciation.

Trim and doors are birch, either enameled or finished mahogany as conditions warranted. The doors and trim where the travel is heaviest were made of metal.

Water and steam lines were carried under-



FIRST FLOOR PLAN

SEMI PRIVATE PATIENT BUILDING

READING HOSPITAL

WEST READING PA

ground in a large tunnel with all risers wherever possible placed in pipe shafts, made accessible through doors on each floor.

The heating system is modulated steam, controlled by thermometers in all the principal rooms. Operating rooms, laboratories, toilets, etc., are ventilated with a mechanical exhaust fan placed in the attic and exhausting through the tower.

The floors and base are mainly of terrazzo with brass jointing strips, all bases having a two inch bevel to prevent furniture and equipment from scarring the walls. The corridors have linoleum centers, inserted flush with terrazzo border. The floors of all laboratories and x-ray rooms are of special acid-resisting composition. In the operating rooms gray flint tile is used on the floors with green tile walls.

A special feature of the operating rooms is the installation of an auxiliary emergency lighting system which was made possible by placing storage batteries in the basement with automatic throw-over switch.

We have described the administration building in the terms of its original purpose, plan, and design; owing to the fact that the entire hospital group will not be erected at this time certain parts of the building will be temporarily adapted to other uses.

The following figures are of interest: length of administration building, 173 feet; width, 50 feet; story heights from floor to floor: first floor, 11′ 3″; second floor, 11′ 3″; third floor, 15′ 0″ (this floor contains the operating rooms, and as there is no floor above the third in the communicating buildings, ceiling height could here be determined quite independently); fourth floor, 9′ 0″; width of corridors, 8′ 0″; length of corridor (and verandah) sections between administration building and adjacent clinical buildings, 33′ 2″. The central lobby is 36′ 0″ long, 33′ 2″ wide, and 20′ 6″ high.

RADIO TALK BRINGS HOSPITAL WORK TO PUBLIC INTEREST

A talk on the Minneapolis General Hospital, Minneapolis, Minn., was recently broadcast by Dr. Walter E. List, superintendent of the hospital, from WCCO station in St. Paul. A number of interesting features of the inside workings of the hospital, many of which apply to other hospitals, were given in the talk. Dr. List described the trail of the patient from the time he enters until his discharge. He especially emphasized that all patients are treated by specialists, and contrary to the common belief, no experimentation is done in this hospital, and no operating procedure is instituted without the patient's consent, and no major operation is performed without notice to the patient's nearest relatives.

Emphasis was also placed on amusements and occupational therapy work of the hospital. Movie shows are provided for convalescents as well as radio receiving sets. In the handicraft department convalescent patients may learn basket weaving, pottery work, making of scarfs, book ends, lamp stands, etc. Books are also furnished patients for reading.

Of general interest is the comparison which Dr. List made of his hospital to a village with a population of about one thousand people in which are the following stores: grocery, drug, dry goods, stationery, butcher shop, laundry, restaurant, and coal yards. He compared the nurses' home to a hotel, since 123 nurses are housed there.

HOSPITALIZATION IN CHICAGO

The Council on Medical Education and Hospitals of the American Hospital Association recently compiled interesting data on hospitalization in Chicago, Ill. The total number of hospitals in the city is ninety-nine, of which sixty-seven are general hospitals; seven, maternity; four, nervous and mental; four, convalescent; four, industrial; three, isolation; three, tuberculosis; and one each of the following: pediatric; orthopedic; eye, ear, nose and throat; urologic; alcohol and drug; incurables, and U. S. Marine Hospital.

The total number of beds is 14,645 and the average number of patients in them, 10,398, making the percentage of beds occupied 71. The hospitals vary in size from 2,500 beds (Cook County Hospital) to seven beds.

You cannot give anything to a magnanimous person. After you have served him, he at once puts you in debt by his magnanimity.—*Emerson.*

OUTLINES OF A GOOD STATE HOSPITAL: PART II, PERSONNEL*

By CHARLES F. READ, M.D., State Alienist, Chicago, Ill.

BEFORE a group of well-planned structures can become a good state hospital it must, of necessity, be efficiently manned. Behind this *intra*-mural organization is another equally important *extra*-mural body in the form of a local board of trustees, or a central board of control. A local board tends to be static, while a state department, in its most enlightened form, is dynamic. However, just as there is danger in the local board becoming too well satisfied with things as they are, so too there is the risk of a state body developing an autocratic viewpoint and a bureaucratic program. This possibility, so far as concerns our present discussion, must offset that of injecting new life into the hospital personnel, from time to time, by way of well-considered transfers and promotional appointments.

Outside Boards of Examiners

Examinations for such advancements must be wisely conducted or they become harmful. They must be competitive, not merely ceremonial procedures. The writer favors outside boards of examiners, in so far as possible, and personal contacts with the candidates. This can be brought about by a combination of written and oral examinations. Examinations, of course, imply the existence of a board, or civil service commission, authorized to supervise them, to maintain eligible lists and to guarantee fair play. Though here and there the practice still exists, the day of self-sufficient state hospitals with personally appointed employees is past.

Administrative Assistant Needed

The superintendent will naturally have served an apprenticeship as ward physician and first assistant. It is also necessary that he know as much, and preferably more, about the needs of his patients as those under him. He must have time for public service in the community and for proper consideration of his administrative problems, and to this end the writer favors the appointment of an administrative assistant to coordinate the innumerable details of institutional management. The prevention of waste, for example, will be one of his greatest problems, and in this particular alone he can save his salary many times over during the year. He will serve as a liaison officer between the non-medical service and his chief, but will have only such administrative duties as may, from time to time, be conferred upon him by the superintendent. He will not interfere with the immediate work of the business office, nor with that of the first assistant physician in the medical service. He must be extremely tactful or he will eliminate himself as a positive nuisance.

Turning to the clerical and mechanical forces, the farm and ground organizations and the housekeeping department, let us consider especially the personnel coming directly in contact with the patients.

Qualifications of First Assistant

The first assistant will have attained his position by competitive examination after some years of experience as ward physician. He already possesses a thorough knowledge of mental disease, but has elected to become an administrator rather than continue to engage actively in the study and treatment of mental disorders. In his work he must strike a delicate balance between independence of thought and loyalty to his chief. The reputation of the hospital among the friends and relatives of patients and various other callers, will, to a great extent, rest with him.

Activities of the Clinical Director

Coordinate with the first assistant, but with little or no administrative powers, is the clinical director—another staff man who has fought his way along much the same route as the first assistant, but who has paid special attention to therapy and research. He will have done a fair amount of laboratory work and have spent some time in a mental hospital for research and education, connected with a university. Under the general supervision of the superintendent, he will direct the clinical activities of the medical staff, instruct the newer men, give lectures, hold clinical staff meetings, organize therapeutic and clinical research, and arrange for the proper presentation of pathological material for the edification and instruction of staff members. He will write papers concerning the scientific work of the hospital and encourage others to do so, but his chief duty will be to do all in his power to maintain a high degree of efficiency in serving the patient. In his various activities toward this end he must have the cordial cooperation of the superintendent and the

*This is the second of a series of articles on state hospitals prepared for THE MODERN HOSPITAL by Dr. Read. The first article, which dealt with the organization of a good state hospital, appeared in the March number, page 242.

first assistant in every way possible.

The pathologist will have direct charge of the clinical and research activities of the laboratory. One of his important duties will be the careful study of necropsy material. At least 30 per cent of all deaths should be autopsied and to secure these postmortems, he must make his studies so interesting to the staff physicians that they will exert every effort to secure permits. A good pathologist commands a salary ranging from three to four thousand dollars a year but is a valuable asset to the hospital because the scientific emphasis of his activities leads the staff physicians to study their cases more carefully, to make better diagnoses, and, in consequence, to give better medical treatment to their patients.

Where their salaries are adequate and their quarters excellent the staff members of the hospital will be eager to "make good." This hospital of 3,000 patients, with an admission service of 800 a year, will employ at least fifteen regular staff physicians, one for every two hundred patients. Two will be assigned to each receiving service and two to the hospital and infirmaries, leaving nine for the group requiring extended care and treatment. This estimate is a moderate one, when one remembers that each doctor must have one day off during the week. This arrangement means that two and sometimes three will be away every day.

Two physicians may well be women, and in addition two or three interns may be employed, if the clinical director will arrange special assignments for them in connection with the services of acute mental and physically ill patients. One staff man should have had good surgical training, another should be interested in the eye, ear, nose and throat, and still another in x-ray work. The surest way for a hospital physician to avoid becoming institutionalized is to attain some proficiency in a special line of work.

Hope for advancement must be held out to all, and be realized, from time to time, by promotional examinations for higher ranks and increased pay. On the other hand, a staff physician who fails to measure up to requirements, after thorough trial, should be unhesitatingly dismissed. It is better to have a smaller staff that is efficient and knows that is must succeed, than to retain efficient men who endanger the morale of the remainder. Although it is not usually the case, competition should be as keen within the state hospital medical service as without. The lack of competition decreases the efficiency of the service.

Two Full-time Dentists Needed

The need of at least two full-time dentists is generally recognized. The work will be largely prophylactic, and in this they must have the assistance of trained helpers. Each patient should be examined and treated every four months.

A graduate dietitian should have charge of ordering and cooking patients' food. She will, in a large hospital such as ours, have to supervise many cooks, not a few of whom are inefficient. She will have comparatively few and simple food stuffs with which to build her menus. Hers is a great responsibility, and extreme care must be taken in selecting a woman who is competent and who will see to it that the food is palatably cooked, decently served, and not wasted.

There will be a nurse training school, with a two-year accredited course, which will qualify the pupils for examination for the degree of R.N., after six to nine months spent in a general hospital. The graduates of this school, or of similar ones in other hospitals, will have charge of all wards, save those for most quiet and dependable groups. A few will act as supervisors and assist the head nurse in conducting the school.

Three Hundred Attendants

In the hospital of 3,000 there will be at least 300 attendants (estimate based upon an eight-hour day) who will receive instruction during the first four to six months of their employment. Two-thirds of them will be women. None will have a mental age of less than thirteen years; we wish that a higher mental age might be required. No women who have had two years or more of high school work will be employed unless they are willing to enter nurse training. If these girls are not ambitious they are not desirable. Married couples should be sparingly employed, because seldom both man and wife prove satisfactory when working together in this peculiar type of work.

Personnel for Special Types of Work

There should be four hydrotherapists for each receiving ward (eight-hour shifts) so that patients may be treated night and day in the hydrotherapy units of twenty beds each.

The occupational therapy teachers, or aides, will operate a department for the instruction of patients in various handicrafts. This instruction should be under the advice of the physicians. There will be at least twelve of these aides under the direction of a chief aide, for the occupational therapy department will have at least 500 men and women in its various classes. A few carefully selected attendants may be used. If a school is conducted the pupils will replace one half of the graduate aides, but a school is recommended for only one hospital in the state. A physical director will conduct the gymnasium work and games, and

manage the recreation grounds in summer. A woman may handle this successfully, but a man of equal ability is generally more satisfactory for this work.

A music-master, with an assistant, will have charge of the band, orchestra and choir, composed, in so far as possible, of patients. They will take music to the various wards during the day, play for "movies" and dances, and assist in organizing other entertainments.

A trained librarian will have charge of the books and reading rooms for patients and employees. She will spend a part of each day upon the wards with her books and magazine cart, which transports the library to the patients. Of course some books will become damaged or destroyed, but this will not happen often, and many patients will be helped by their use.

A social service department is essential to a good state hospital; five workers for a hospital of 3,000 is a modest estimate. The chief worker should have had psychiatric social service training in a recognized school; the remainder should have had a college education, or its equivalent. A list of their duties is, perhaps, not essential, as the need for social service is now quite generally recognized. This department will be utilized largely by the clinical director in his various activities.

The fire marshal will have charge of the local company, and when not conducting fire drills will be constantly occupied with tours of inspection and the instruction of employees.

Industrial foremen are valuable therapeutic agents. They should be selected for their tactfulness as well as for their mechanical ability. The number required depends upon the amount of shop work done.

Out of every four patients admitted, it is probable that one will remain for some time in the acute mental service, a second will be a hospital or infirmary case, a third will be well enough for occupational therapy work, and a fourth can, in a short time, be detailed to some industrial activity. The psychopaths, defectives, alcoholics, mild arterio-sclerotics and the brighter, more active cases of dementia praecox are among the latter. The industrial foremen and, in fact, all the men and women employees in charge of detail work, must know how to deal with these patients tactfully, kindly, firmly, and helpfully. The industries of a good state hospital must have a distinct therapeutic as well as an economic aim. A school of instruction for those in direct charge of working patients would be quite an ideal arrangement.

A state hospital has nothing to sell but service, and its efficiency can be judged only by the character and extent of this service. No matter how excellent the physical upkeep may be, the effectiveness of the hospital's humanitarian efforts will depend upon its employees and the manner in which their abilities are organized and coordinated. Along what lines, toward what main ends, these efforts should be directed, is still another story.

A. M. A. ANNOUNCES HOSPITALS APPROVED FOR INTERNSHIPS

A list of the hospitals of the United States which have met the requirements of the Council on Medical Education and Hospitals of the American Medical Association for approved internships, up to date of February 10, 1925, has recently been published.

The hospitals are general hospitals, having a total capacity of 132,037 beds, considered in a position to furnish acceptable internships for medical graduates. The list does not include hospitals which provide approved residencies in certain specialties. Copies of the list may be obtained from the headquarters of the American Medical Association, 535 N. Dearborn St., Chicago, Ill.

HOW THE PUBLIC MAY COOPERATE WITH THE HOSPITAL

There are many little matters wherein the public may cooperate with the hospital to increase its efficiency in serving those who come under its care.

It helps if relatives and friends observe the visiting hours, thereby maintaining hospital discipline and benefiting the patient.

It helps if the patient and the friends have confidence that the physician and the hospital know what is best for the patient in the matter of diet, treatment, etc.

It helps if relatives refrain from asking admittance to the operating room, since the presence of anyone outside of the physician and those assisting him lowers the surgeon's efficiency and causes an uneasy feeling which will not redound to the patient's benefit.—The *Reading Hospital Bulletin.*

A scene in one of Chicago's hospitals, showing some of the tuberculous ex-service men listening in on the radio. The feature of this set is that it has but one dial, which makes it very easy for the men confined to their beds to operate. By stretching out his arm the patient can turn the dial without even looking at it.

TYPICAL SCENES IN THE NORTH END HEALTH UNIT, BOSTON, MASS.

(Upper left) Waiting room on main floor; (upper right) the auditorium which is located on second floor; (left center) director's office; (right center) a view of the eye clinic; (lower left) scene in the dental department; (lower right) infant and child welfare clinic showing a baby being weighed and measured.

THE FIRST GEORGE ROBERT WHITE FUND HEALTH UNIT, BOSTON, MASS.

By CHARLES F. WILINSKY, Director, Health Units, Health Department, Boston, Mass.

THE dedication on November 1, 1924, of the first George Robert White Fund Health Unit, built from the income of the White Fund, was indeed a memorable occasion in the field of public health. The relative importance and value of this occasion was emphasized in the dedicatory addresses made by Dr. George E. Vincent, president, Rockefeller Foundation, Dr. Haven Emerson, College of Physicians and Surgeons, Dr. David Edsall, dean of Harvard Medical School, the Hon. James M. Curley, mayor of Boston, and others who participated in the exercises. This is the first of a chain of proposed health units to be erected in various sections of Boston from the income of the White Fund to be located where apparent need for the same exists, and plans have already been drawn for two in East and South Boston.

The new North End Health Unit, Boston, Mass.

This splendid decentralized health program planned for Boston, places every one interested in the advancement of public health and preventive medicine under obligation to George Robert White, the donor of this most generous fund of $6,000,000 to be used as he desired, "for creating works of public utility and beauty for the betterment, use and the enjoyment of the inhabitants of the city of Boston."

What could possibly have been planned that could better serve the inhabitants of Boston than the development of a piece of work which will improve the health of infants, children and grown-ups of the city in which he lived and which he loved, as is emphasized by his generosity?

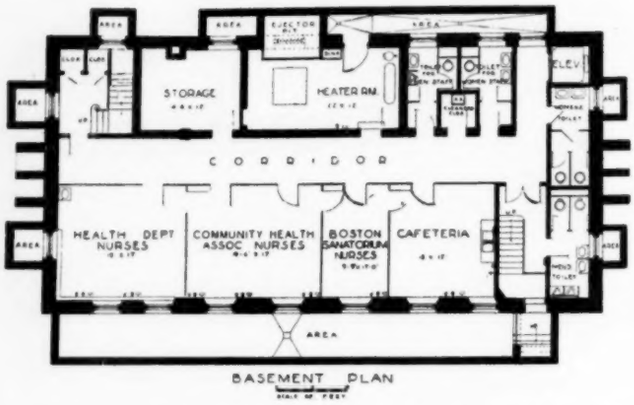
Need Shown by Blossom Street Unit

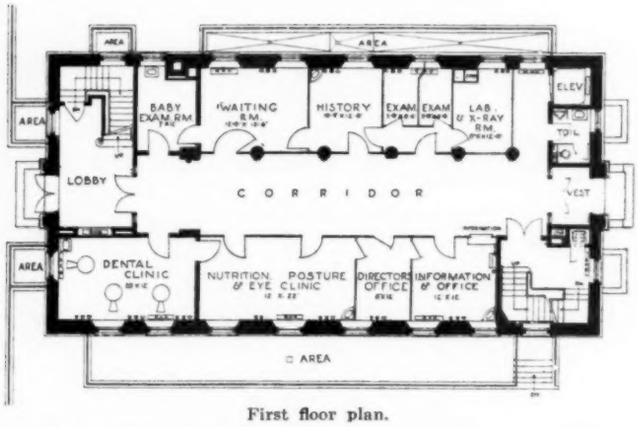
The need, importance, and value of decentralized community health work were emphasized and proved by the Blossom Street Health Unit, in the west end of the city, which has been functioning and carrying on health center activities from the infancy of health center development in the United States. The growth of the various services and the excellent community reaction to this center are evidenced by increased services and attendance, with emphasis placed only upon prophylactic treatment and health education. From a modest beginning in 1916 with few agencies participating, there has developed a continuity of various activities which served 90,000 people of the west end in 1924, a service contributed by the representatives of public and private health agencies functioning at Blossom Street.

Types of Service Offered

The program carried on there and the one which is duplicated in its entirety in the new North End Health Unit includes pre-natal service, infant and child hygiene with its chain of baby and child health conferences, dental services, nutrition work, posture classes, eye refraction, mental hygiene and habit forming classes, poster work, Red Cross classes for young girls who are taught first aid and care of the home, periodic health examination service and the dissemination of general health education.

A view of the roof garden of the North End Health Unit.





First floor plan.

The North End Health Unit is situated in the most congested part of the Italian section of Boston. The building is rectangular in shape, four stories high, built of red brick with limestone trimmings, forty feet wide and eighty feet long, and standing almost in the center of a lot approximately 15,000 square feet in area. The yard is paved with granolithic squares with the exception of a planting space three and one-half feet wide which almost completely encircles the land, and upon which are planted bay trees and shrubs forming a splendid background for this imposing building. In the rear yard is a massive flag pole with an iron and granite base where flies the American flag—a patriotic object lesson to the foreign people who inhabit this section of the city.

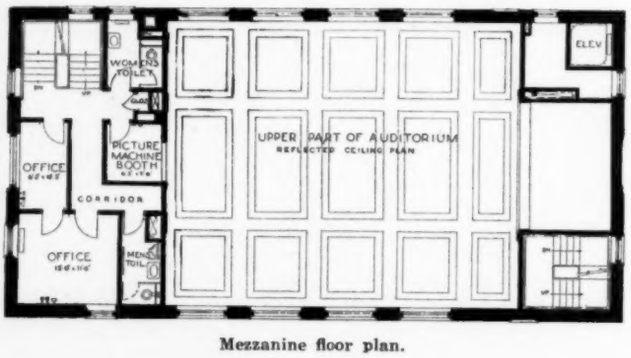
To the north of the flag pole is located a baby carriage shelter forty-five feet long and six feet wide, and near it a drinking fountain. A wrought iron fence six feet long surrounds the lot except where buildings border the estate. The yard is well lighted with ornamental electric light poles and electric lanterns over the gates and various parts of the yard.

The building is of first-class fireproof construction with terrazzo floors and marble borders and divisions. The building itself is crowned with a limestone cornice and a brick parapet with ornamental penetrations in limestone. The architecture is of the Georgian period and the entrances at front and rear are flanked on either side by Roman doric pilasters, surmounted with entablatures containing inscriptions in stone. These entrances are on two of the most important and prominent streets in the north end section of Boston where the health unit is located and where live people the center is trying to serve.

Forty Children Receive Prophylaxis Daily

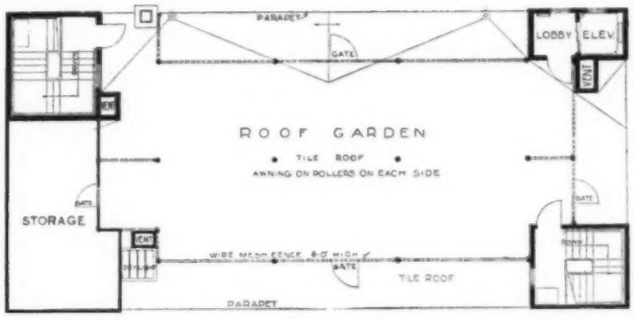
On the main floor one enters a corridor about twelve feet wide and receives his first directions from the information window. To the right is the administration office and the private office of the director. On the same side of the corridor there is an extremely well-equipped dental room where three dental chairs, two dentists and one hygienist are in full time attendance daily. Forty children receive prophylactic treatment each day. Adjoining the dental room there is an excellently equipped refracting room about thirty feet long and twelve feet wide with a daily refracting clinic for pre-school age and school children.

To the left of the corridor on the main floor a suite of rooms has been laid out for the conduct of infant and child hygiene programs. From the main corridor which is used as a waiting room where large groups of mothers assemble with babies, several mothers are ushered into a small dressing room and, after undressing their babies, are taken into the weighing room, where the babies are weighed by the nurses and then referred to the doctor's examining room. These conferences are held twice weekly for babies and twice



Mezzanine floor plan.

Second floor plan.



Plan of roof garden.

weekly for pre-school age children. In addition to this, dietetic and nutrition conferences are held weekly in this suite of rooms.

Suite for Periodic Health Examinations

Leading off this suite of rooms is another suite for the conduct of periodic health examinations, pre-natal services, and such other medical services which come within the scope of prophylaxis. This suite has a history room, two cubicles where two people may be simultaneously examined, as well as a laboratory and fluoroscopic room. In this suite the Boston Lying-in Hospital conducts its pre-natal clinic and here are planned periodic health examination clinics for men and women. These clinics are held in the evening so that they may be convenient for working people.

A well-aired and lighted basement with high windows and large areas for air and light is used for the offices of the various nursing agencies. One side is divided into three large offices, each 19x17 feet, which are used by the health department nurses, community health association nurses, and Boston sanatorium nurses. Adjacent to the offices of the nurses is a well-equipped cafeteria which is used especially for lunch by the workers of the different staffs. On this floor are also located toilet facilities for the workers as well as for people who come in to avail themselves of the services of the unit. Locker rooms, boiler rooms, and cleaning rooms are also located in the basement.

On the second floor one enters by double doors into the auditorium which has a seating capacity of 250 and a ceiling height of two stories. The stage platform is raised three feet above main level, on one side of which is an ante-room from the elevator; at the other side is a stairway. Two offices which are used by welfare agencies administering local relief, are also located on this floor.

On the mezzanine floor is located a moving picture machine booth, two offices for a welfare agency, as well as additional toilets for men and women.

The roof is reached by two stairways and elevator. It has a tile floor and frame work supporting a canvas awning roof, and sides enclosed with wire net work, eight feet high, serving as a protection for children. The roof is equipped with appropriate furniture for children which include hammocks, swings, sandpits, game tables, small chairs, which will be used in the summer as a means for improving the condition of malnourished and pre-tuberculous children who may stay upon the roof all day and receive their lunches from the cafeteria in the building.

The building is heated by an oil plant which does away with dust and dirt. An adequate ventilating system which removes the bad air and replaces it by fresh, clean air has been installed.

EVOLUTION

"A neighbor's child was sick—whose turn tonight?
The case was at the crisis; mother went.
She had an art in sickness—moved quietly,
Knew symptoms well, and herbs, roots, essences.
She learned them from her mother—she, from hers.

"Now the times change, the ancient lore gives way,
Or meets the keen, relentless test of science.
As blacksmith grew to engineer, and barber became surgeon,
The kindly neighbor now is nurse; and studied skill
Adds to the art of friendly ministration."—*Antioch Notes.*

HOSPITAL DOORS

Doors ajar; and room past room
  Cots, pale faces, flowers in bloom.
In and out the nurses wind,
  Calm, inscrutable and kind.
Doors made fast: now destiny chooses;
  Science wins and science loses;
Outer circles wait and cling;
  Fear and hope go whispering.
Open doors; intent and always,
  Footsteps down the long white hallways.
Somewhere, far, an infant's cry—
  For when we are born we begin to die.

—Agnes Lee.

FABLE OF THE CONSCIENCE-STRICKEN PATIENT

An ex-patient was walking in a forest when it began to rain in torrents. He looked about for shelter, found a hollow log and though it was a snug fit, crawled in. The rain soaked the log and when the sun came out the ex-patient found himself tightly imprisoned and though he struggled to exhaustion, he could not budge himself an inch. He realized that he must slowly starve to death and his whole life, his good deeds and his sins of commission and omission, passed through his mind. Then he remembered that he had not paid his hospital bill and he felt so small that he crawled out of the log easily.

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THE HOSPITAL'S CHANCE FOR SELF-EXPRESSION

NATIONAL Hospital Day. What does it mean to your hospital? Is it an uninteresting and boresome procedure or is it welcomed as an occasion for the hospital to act as hostess and exhibit its work to the community? The former attitude is that usually entertained by the indifferent hospital; the latter is that of the progressive hospital which has the true community spirit. May 12 is thus a challenge to the hospital. It is a chance for self-expression. The day can be as big and as worth while as hospitals, individually and collectively, can make it.

For the past several years, May 12, the birthday of Florence Nightingale, has been observed by a number of hospitals of the United States and Canada as a day on which to present the mission of the hospital to the public, thereby helping to cement the true relationships of the hospital and the community.

This year, under the guiding hand of the American Hospital Association, it is hoped that the day will be celebrated by the entire hospital world. The association does not purpose to prescribe any uniform program of celebration for the hospitals of the country, but rather encourages each hospital to choose its own medium of self-expression.

Because of differences in size, scope of work and local conditions, hospitals will celebrate in various ways. Some may be able to combine a number of significant events, such as open house, nurses' graduation, dedication or laying of the cornerstone of a new building, founders' day, the annual baby party, pageants and exhibits, into the one celebration. Other hospitals may be able to launch but one event but that one can be made so successful that it is an adequate means of expression. Every hospital can at least hold open house, one of the most effective means of acquainting the public with the hospital.

For those hospitals which are interested in making the most of the day there are almost unlimited ways of bringing the hospital to the people, with the cooperation of local business and social agencies. The hospital which publishes a bulletin may well have a special National Hospital Day edition. Information may be disseminated through churches, theaters, by radio talks, by window displays in department stores and florist shops, and by attractive posters in business offices of the town. These are but a few suggestions of what may be done to make the most of this opportunity to claim public attention, to break down the barriers which certain ignorant individuals build around the hospital, and to

show the community that the hospital appreciates the support which the community gave in that recent drive for funds.

If every hospital in the country will but fly its colors May 12, we may look to the future for a National Hospital Day when people throughout the length and breadth of the land will pause and behold in the hospital the embodiment of the ideals of Florence Nightingale—an institution which by its whole-hearted care of the sick and its protection of the well is the most powerful influence in community life.

THE SOUVENIR EVIL INVADES THE HOSPITAL

ORDINARILY we think of the sick man as a harmless individual whose attitude toward life, and especially toward his benefactors, has become more kind through the amelioration of physical suffering. But our faith in the patient's kindly attitude toward the hospital and in his honesty weakens with the increasing number of reports from hospitals which suffer wholesale plunder upon the discharge of patients.

It is well known that hotels are obliged to replace fifty per cent of their linen and silverware every other year, partly as a result of the souvenir evil, but we hardly expect humanitarian institutions such as hospitals, to be subjected to that sort of treatment. However, some glaring instances recounted at a recent state hospital association meeting are convincing evidence that an increasing number of patients feel no more moral obligation about leaving the hospital whole and intact than they do a hotel.

One hospital reported that three bedlights had been stolen the first week that they were installed; another reported that fifty per cent of its electric fans had disappeared in one year. And the plundering is not confined to electrical goods, for a similar, if not heavier, loss was reported in such articles as hot water bottles, linen, silverware and other articles of the tray service. In short, anything that is conveniently removable is no longer safe in certain hospitals, it seems.

Since hospitals are unable to withstand this needless loss, some have been forced to take what seem to be drastic measures against this evil. One institution charges its electric fans to the occupants of the private room until discharge; another requires inspection of all packages taken from the hospital by both patients and employees. Some institutions have made a student nurse responsible for hot water bottles on the wards, an employee, for all silverware in the serving room. It is a simple matter to keep check on articles in the private room, but not so easy to guard ward supplies which also come in for their share of theft. Because of his being a part-pay or free patient we have rightfully expected of the ward patient at least a well-disposed attitude toward the hospital; instead the institution is being robbed in return for charitable service.

To a large number of patients who feel grateful for service rendered and who consider themselves guests of the hospital, military vigilance seems unwarranted and ridiculous. Drastic measures will only augment the cold institutional atmosphere with which many people are wont to clothe the hospital, and they are an additional burden to employees as well as to the whole administration. But something has to be done to safeguard the hospital against this loss. It seems an insult to human respect to be compelled to bolt, rivet and chain fixtures to prevent patients from carrying them off, but we may be forced to do that if we continue to be a nation of souvenir hunters and continue to find that we cannot trust even the sick man.

POWER—THE SHARP KNIFE

IN NO way can administrative ability be better measured than by watching the way in which subordinates handle authority delegated to them. The timid are afraid to use it and the result is apt to be slack slothfulness. Conversely, the egoist tends to the ruthless application of the power delegated to him, and the way in which he applies this force may even be carried to the extent of brutality. This results in a large labor turnover and those who remain do not give that whole-hearted cooperation which makes for solidarity and team work.

Authority is a very sharp knife. If it is grasped weakly, it is apt to slip through the fingers and cut the holder's hand. The person who thus laxly lays hold on power, injures himself and introduces laxness into the organization. In contrast, he who grips the handle firmly is pretty apt to strike out too vigorously with this keen weapon and in so doing, to injure the subordinate individual and the organization.

In fact, both methods of applying authority are incorrect and both are equally disastrous to collective effort.

Power is an edged tool and there must be no fumbling in its use. At the same time, it is not a sabre. On the contrary, it is like a keen scalpel and should be grasped as though it were a pen, applying its cutting edge where needed and lifting it when its services are not required. Grasped in this way, it will not slip through the fingers.

It can make a clean incision where such treatment is indicated and it can avoid delicate parts which it is unwise to injure.

This is the way in which the real administrator handles power and if he would head an accurate, efficient, productive organization, he must see to it that his subordinates similarly utilize the authority delegated to them.

ALL ROADS LEAD TO THE HOSPITAL AT A. M. A. CONGRESS

THE proceedings of the annual Congress on Medical Education, Medical Licensure, Public Health and Hospitals of the American Medical Association held in Chicago on March 9, 10, 11 and 12, were characterized not alone by the high quality of the papers and addresses presented, but also by the valuable discussions evoked.

From the point of view of THE MODERN HOSPITAL, the outstanding feature of practically all the discussions was the great importance attached to the hospital in any and all schemes for the betterment of the education of medical practitioners, and for the improvement of the health of the community.

We have always believed that while the primary function of a hospital must, of course, continue to be the care and treatment of the sick and injured, its importance as a link in the general scheme of health measures and health education should be increasingly recognized. The justification of our faith by the proceedings of this congress was, therefore, most gratifying.

In the field of medical education, notwithstanding the widely varying viewpoints from which it was considered in papers presented by leaders eminently qualified to discuss it, all roads led to the hospital. Whether the speaker favored shortening the period of training, or believed that the present high standards should be maintained, it was evident throughout the discussions that the period and intensity of hospital training should not be lessened.

It was interesting to learn (and a fact to be remembered in considering the question) that the present high standards of requirements for undergraduate medical education have only brought us up to the level of European standards.

Keen attention was centered on the pre-clinical work of the colleges and medical schools, and the need for correlation of the pre-clinical studies with the subsequent clinical work was stressed. In this connection, while not a great deal was said on this point from the platform, the need for improved pedagogical methods, particularly on the part of medical lecturers, was discussed vigorously in some of those useful lobby conferences between sessions—a commendable characteristic of congresses and conventions.

While many of the lecturers in pre-clinical scientific subjects have been trained in the methods of imparting knowledge, it appears that this is rarely true of the highly skilled medical and surgical specialist who lectures on clinical subjects. It would seem that the experience in other fields of professional education may not be without significance in the field of medical education. The great technological institutions in this country and abroad, whose development has been so remarkable during the last few decades, learned long ago that it was sometimes necessary to remind the eminent specialist that education is not a process of pouring in information, but of leading out the powers of a student. (Note the root: *e duco.*)

But whether the course be shortened by omitting subjects, or by better methods of instruction—a matter on which speakers differed—there was evidently a general consensus of opinion, regarding the necessity and value of more and better opportunities for work in the hospital; in order to carry out that important pedagogical principle—"learning by doing."

From the viewpoint of the improvement of the professional equipment of the medical practitioner in the town or country, the discussions again emphasized the hospital as the all-important factor in this vital problem. Without the help and inspiration which come from contact with his fellow practitioners, the doctor, especially in small or scattered communities, finds it most difficult to keep in touch with new developments, and to evaluate the many new discoveries. Such contacts are best made in the small community through the hospital.

The important session on medical service in rural communities, which included in its deliberations the wider field of public health, also brought out the need for better hospitalization of rural communities.

Indeed, as remarked earlier, the outstanding impression gained from a faithful attendance at the meetings of this congress was that the hospital is an indispensable community factor alike in the care of disease, in the education of medical practitioners, and in the promotion of public health. We must, then, continue by every legitimate effort to provide hospitals in those communities that are still without them, and to raise to the highest efficiency existing institutions.

PLANS FOR NATIONAL HOSPITAL DAY AUGUR UNPRECEDENTED CELEBRATION*

NATIONAL Hospital Day, May 12, is looming on the horizon of hospital activities as the largest single-day event of the year 1925, and the National Hospital Day Committee of which Mr. C. J. Cummings, superintendent, Tacoma Hospital, Tacoma, Wash., is chairman, is preparing for the greatest celebration of this day since its inauguration five years ago.

Dr. Franklin H. Martin, director general, American College of Surgeons, Chicago, Ill., and the Rev. C. B. Moulinier, S. J., president, Catholic Hospital Association, Milwaukee, Wis., have been appointed advisory members of the National Hospital Day committee. The Governor General of Canada has been asked to be honorary chairman of the day this year.

From all parts of the United States come reports of enthusiastic preparation for this one day of the year devoted entirely to hospitals and their work. Could Florence Nightingale, whose birthday is commemorated in the annual celebration of National Hospital Day, return to this earth and see the demonstrations of modern care for the sick which will be made throughout this broad land on that day she would be astounded. Little did she dream, when during the stirring days of the Crimean War and subsequent events during which she helped to carry out the first methods of practical and sanitary care for the wounded and sick, that out of her noble work would grow the modern and scientific hospitals of today. Probably by no stretch of her imagination could she have foreseen that in the years to come great nations would unite in honoring her memory and paying tribute to the fruits of her efforts.

Primarily, the object of National Hospital Day is to acquaint the public with the present day hospital and to this end the National Hospital Day Committee is urging this year that special efforts be put forth by every hospital in the United States, Canada and practically every continent to attract as many visitors as possible to their institutions. The committee believes that impressions made on the eye are more lasting than those on the ears, and that demonstrations, exhibits, and inspections made possible to the public on this particular day have a farther reaching benefit than all such information conveyed through speeches, addresses, or the printed work.

Individual institutions have their own peculiar problems in the arranging of plans for the observance of National Hospital Day and suggestions applicable in one instance may not apply to another. But from the enthusiastic response already exhibited it is certain that this year's celebration will be on a scale never before attempted.

In calling for assistance in the preparation of the national observance, Mr. Cummings reports that he has found hospital officials and their staffs more than ready to cooperate in any manner possible. For instance, here are a few excerpts from replies to various letters sent forth:

"I accept with thanks the appointment for observance of National Hospital Day in this city. I will try to give the same all the publicity necessary to put it across with flying colors."

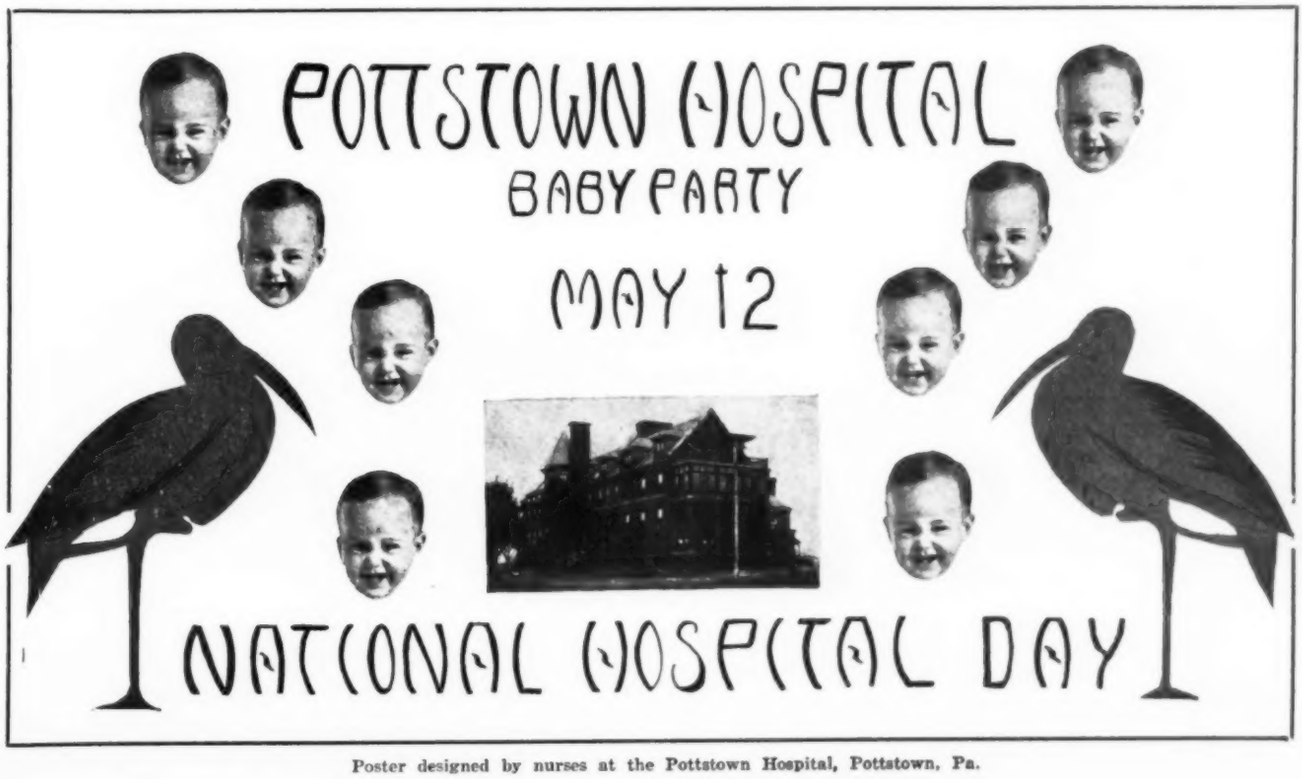
"I will cooperate to the full extent of my ability."

"I will be very glad to serve as a member of the regional committee of ———— for the observance of National Hospital Day and I assure you I will do everything possible to put over a good program for our territory."

"It will be our pleasure to do all in our power, as in the past, to further the interests of National Hospital Day as we deem it an event worthy of our special consideration."

"If there is anything I can do for the advancement of

*Summary of advance plans for May 12, submitted by Mr. C. J. Cummings, chairman, National Hospital Day Committee.



Poster designed by nurses at the Pottstown Hospital, Pottstown, Pa.

this cause I will be only too glad to do it."

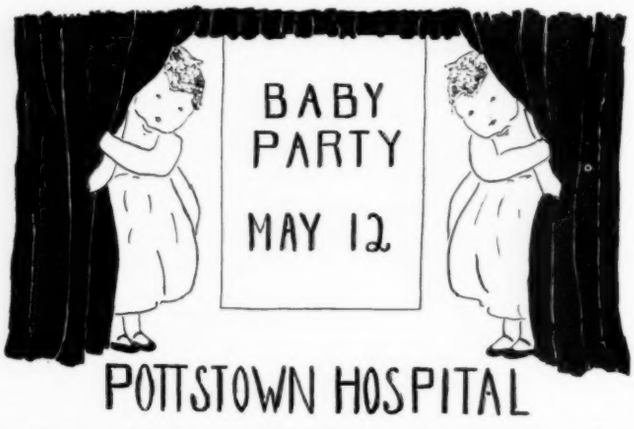
From the various hospitals which every year give much attention to National Hospital Day, from numerous communications, and from personal experience Mr. Cummings has gathered the following suggestions to present to those who are planning special celebrations:

Suggestions for Advance Publicity

Have local motion picture houses run slides telling of the date for a week or two before National Hospital Day. Enlist the aid of your newspaper friends or get a line-up of good newspaper articles and run them consecutively until May 12. Druggists, florists, department stores, confectionery stores, book stores, and all merchants will be glad to cooperate by exhibiting window displays.

If your hospital has a regular bulletin, issue a copy just before May 12, using hospital day as a special subject. Copies of these magazines, or bulletins will make good souvenirs for visitors to the hospital to take away with them. Request your local ministers to refer to National Hospital Day in their sermons on the Sunday preceding May 12. Encourage essays on National Hospital Day and the life of Florence Nightingale in the public schools and, if advisable, offer prizes to be awarded at one of the hospitals on National Hospital day. Have your employees wear National Hospital Day badges or buttons for at least two weeks before May 12.

Have a reception committee composed of trustees' or doctors' wives or graduate nurses greet your visitors throughout the day. If possible, have graduation exercises for your nurses on that day. If you have a roof garden or other available location, engage an orchestra to play appropriate music the entire day. Baby shows are always popular and if you can arrange such an event it will bring attendance where other means fail.



Another one of the posters which is being used by the Pottstown Hospital in its publicity for National Hospital Day. It was designed by the nurses at the hospital.

Baby Shows Are Popular Method

From letters received from regional committeemen in various states come reports of past and future celebrations of the day.

Christ's Hospital, Topeka, Kan., has for the past two years conducted a very successful baby show on National Hospital Day. Walker County Hospital, Jasper, Ala., has had the baccalaureate sermon on May 11 for its nurses, and graduating exercises on the night of the 12th. During the day the hospital holds open house.

Twin Falls County General Hospital, Twin Falls, Idaho, held a baby clinic last year. A clinic of this kind never fails to draw visitors. Chipman Memorial Hospital, St. Stephen, New Brunswick, throws the institution open to the public annually on May 12 and serves a light lunch.

Lay Cornerstone on May 12

A cornerstone of the new addition to the hospital will be laid National Hospital Day by the Westmoreland Hospital Association, Greensburgh, Pa., according to W. J. Bairstow, superintendent. Appropriate ceremonies will be conducted. At Mt. Sinai Hospital, Milwaukee, Wis., the Milwaukee Central School of Nursing is planning a pageant depicting important incidents and episodes in the history of nursing. All schools and hospitals in the city will be invited to participate. Culver Hospital, Crawfordsville, Ind., is eager to have a new, modernly equipped hospital, writes L. E. Goeppinger, superintendent. On hospital day this institution will emphasize the need and the advantages of a new hospital to enable it to give more efficient service.

Party for Babies' Alumni Association

The Methodist State Hospital, Mitchell, S. D., of which Mabel O. Woods is superintendent, is planning to have a "baby day" inviting all of the mothers and babies of the past year to attend the reception to be given by the hospital. Another birthday party for the Babies' Alumni Association will be the feature of the celebration at the Mary McClellan Hospital, Cambridge, N. Y.

Presbyterian Hospital, Charlotte, N. C., will have commencement exercises on National Hospital Day. Window displays showing an indexing system used in the institution will be exhibited in the leading stores of Houston, Tex., by the new Hermann Hospital.

The committee wishes to make personal reference to the hard and energetic work of the regional committee chairman and committeemen who are serving this year. Personal letters have been sent to all at various times. The response from the state heads and committeemen this year will be a celebration of National Hospital Day that will be unprecedented. In each state of the Union and from Canadian Provinces the ingenuity, experience and cleverness of every hospital worker is being tested to the utmost to find new ways and means of attracting the public to the hospital on National Hospital Day. Hospital journals and similar publications are doing all in their power to stimulate and increase the growing interest in this great annual event, and so successful have been the efforts put forth in the preceding years that professional and business men in all lines of endeavor are watching with interest the developments of modern hospital methods and the progress of medical science. National Hospital Day is rapidly assuming a place of importance in the nation's calendar of annual celebrations, and is bringing to the thousands of sick and afflicted the attention of the public which they have so long deserved.

Should Promote Hospital Visiting Idea

As a closing thought to the hundreds of hospital officials who are this year striving harder than ever to bring the public to their doors on this particular day, the committee wishes to suggest that National Hospital Day does not call for the celebration of but one day of the year in an open house to the public, but for a ready welcome to visitors at all times. Let the public know what you are doing and how you are doing it and strive to so raise the standard of your respective institutions as to feel proud to demonstrate by it the modern advancement of the noble work begun centuries ago by Florence Nightingale whose birthday we commemorate next month.

Reports describing some successful celebrations of last year and plans for varied programs for this year have been received from many of our readers all of which evidence genuine enthusiasm on the part of hospitals in making the most of the day.

Pottstown Hospital Has Extensive Program

The Pottstown Hospital, Pottstown, Pa., is adding the timely note to its celebration this year by putting the hospital before the community in the form of a cross-word puzzle contest which will be held by the local paper, the Monday, Wednesday and Saturday of the week preceding May 12. All the words in the puzzles will pertain to the different departments in the Pottstown Hospital and will suggest the coming celebration of the nurses and the baby party to be held May 12, according to Miss Mary E. Henry, superintendent of the hospital. Winners of the puzzle contest will receive awards at the hospital on National Hospital Day.

Souvenirs for Baby Alumni

Another way in which May 12 will be brought before the people, focusing attention on the hospital, will be by attractive posters describing events, such as the laying of the cornerstone of the new nurses' home and the posters describing the baby party, two of which are shown here. This year at the party each baby will be awarded a Liberty Bell Bank and a one-dollar savings' account, which are being donated through the courtesy of the Pottstown Trust Company. In addition, all babies will be given souvenirs which will be products of manufacturing concerns making articles for infants and mothers. A speaker from the State Child Welfare Bureau will talk to mothers, and booklets and pamphlets on the care and feeding of infants will be distributed to the mothers.

The board of managers of the hospital will hold its annual meeting which will be open to the public. The annual report will be read and a review of all work accomplished during the year will be presented, followed by an appropriate musical program.

Sometime during the week the playlet "Special Duty" will be given by the nurses of the training school.

Special Edition of Bulletin

A special bulletin will be published which will be mailed to all subscribing members of the hospital, and distributed at the different churches on the Sunday previous to National Hospital Day. A special National Hospital Day button will be distributed to the school children and to everyone who visits the hospital during the week. The senior class of the high school will be invited to come in groups to visit the hospital, and twelve high school girls will be appointed by the principal of the high school to be at the hospital on May 12 to help the nurses usher the visitors through the hospital. The drug and department stores will have window displays pertaining to the sick room, and one of the department stores will have a replica of a hospital room, with patient, nurse and doctor, on display for several days.

Plan State-wide Celebration for Indiana

In Indiana, general plans for a state-wide celebration of the day are assuming form, according to Mr. Robert E. Neff, administrator, Robert W. Long Hospital, Indianapolis, chairman of the state committee. Plans include the appointment of about thirteen district chairmen who will be responsible for their particular district. Indorsement by the governor and by as many city mayors as possible will be secured for the day's celebration. Florists are to be requested to run special advertisements in the newspapers calling attention to the day, while in Indianapolis the Merchant Heat and Light Company's motograph, located in a prominent corner of the city, will be used for publicity purposes.

MY PLEDGE AND CREED

REVERENTLY *do I pledge myself to the whole-hearted service of those whose care is intrusted to this hospital.*

TO THAT END *I will ever strive for skill in the fulfillment of my duties holding secret whatsoever I may learn touching upon the lives of the sick.*

I ACKNOWLEDGE *the dignity of the cure of disease and the safeguarding of health in which no act is menial or inglorious.*

I WILL WALK *in upright faithfulness and obedience to those under whose guidance I am to work and I pray for patience, kindliness and understanding in the holy ministry to broken bodies.*

Winnipeg Hospital to Celebrate

Plans of the Winnipeg General Hospital, Winnipeg, Man., indicate that hospitals of western Canada are lining up with those of the United States in celebrating the day. A series of social events will feature the day at the Winnipeg General Hospital this year. Open house will be held for everyone and all departments will be open for inspection, and tea will be served in the reception room of the nurses' home. Plans for the evening have not yet been decided upon. Formerly the hospital held its nurses' graduating exercises on that night.

Home-coming for Nurses

Reports from two of Chicago's leading hospitals show that preliminary plans are being worked out to make the day the success that it has been in previous years. Wesley Memorial Hospital is planning a general reception from two to five in the afternoon in the main reception rooms of the hospital. Tea will be served on the roof garden all afternoon, and an orchestra will furnish music. In addition the nurses' chorus of fifty voices will sing a number of selections. Last year over seven hundred people visited the hospital on May 12.

A special feature is made of the home-coming for nurse alumnae.

Woman's Auxiliary Board in Charge

At the Presbyterian Hospital, Chicago, the National Hospital Day program is in charge of the woman's auxiliary board. Definite plans have not yet been formed for the celebration this year, but it is expected to carry out the program along similar lines to that of past years. Special music will be provided throughout the hospital for the patients, luncheon will be served to visitors and special guides will be provided to take visitors through the hospital and each department will be on exhibition.

Dedicate New Surgical Building

The Miami Valley Hospital, Dayton, Ohio, is planning to dedicate its new surgical building, nearing completion, on National Hospital Day. Dedication exercises will be held and the building will be open for inspection.

The Chicago Memorial Hospital, Cook County, and several other large hospitals in Chicago, plan to keep open house on May 12.

The Decatur and Macon County Hospital, Decatur, Ill., one of the largest hospitals of southern Illinois, is planning its celebration for May 12 this year around the annual baby home-coming. Last year the hospital combined this event with an honorary reception for the founders of the institution.

In keeping with National Hospital Day as the celebration of the birthday of Florence Nightingale, many hospitals plan to bring to public attention the spiritual and charitable mission of hospital service. It seems but fitting that May 12 should be a day to display the ethics and ideals of the hospital as well as to demonstrate the physical equipment. A good way of professing the service ideals of the hospital is by bringing to public attention their expression in "My Pledge and Creed" which has been adopted by many hospitals as a symbol of hospital service and a guiding standard of ethics. We suggest that every hospital have a copy of the pledge and creed on display May 12 where all visitors may see it. If the exercises of the day have a note of solemnity, such as dedicatory exercises, nurses' graduation or the commencement baccalaureate sermon, the words of the pledge may be recited by the presiding officer and repeated by the hospital people present.

If the hospital has a parade the pledge and creed might be given prominence in the floats as the banner of hospital service. If plays or pageants are a feature of the occasion the pledge may be worked into the theme or displayed on the stage.

If the churches of the town turn attention to the hospital idea in the sermons on the Sunday preceding May 12 the pledge and creed may well be worked into the text.

In the publicity work preceding the day, the pledge may be used in the hospital bulletin, and on posters displayed in store windows in connection with demonstrations. It may be incorporated into literature distributed among the churches and theaters, it may be flashed on the screen at moving picture houses, and used in connection with newspaper publicity.

ASSOCIATION OF DIRECTORS OF NURSING SCHOOLS FORMED IN LOUISIANA

The Louisiana Nurses' Board of Examiners called a meeting of the hospital superintendents and directors of schools of nursing at the Touro Infirmary, New Orleans, La., February 25, 1925, with a view to forming an organization whose object would be the exchange of ideas on hospital and nursing problems and closer co-operation. Representatives from all accredited hospitals and schools of Nursing from the state were in attendance, and a stimulating meeting was held.

The new organization will be known as the Louisiana Association of Directors of Schools of Nursing. The officers elected are: president, Dr. John D. Spelman, superintendent, Touro Infirmary, New Orleans, La., vice-president, Nena T. Self, R.N., director school of nursing, North Louisiana Sanitarium, Shreveport, La., secretary-treasurer, Sister Kostka, R.N., director, school of nursing, Charity Hospital, New Orleans, La.

ELEVENTH ANNUAL NEGRO HEALTH WEEK TO BE HELD APRIL 5-11

The eleventh annual negro health week will be held this year from April 5-11 under the direction of the Tuskegee Negro Conference and the National Negro Business League, in cooperation with the U. S. Public Health Service, state, county and city health departments and other organizations. An outline of the ground to be covered during the week has been published in pamphlet form by the division of venereal diseases, U. S. Public Health Service.

U. OF MICHIGAN TO HOLD PUBLIC HEALTH SUMMER SESSION

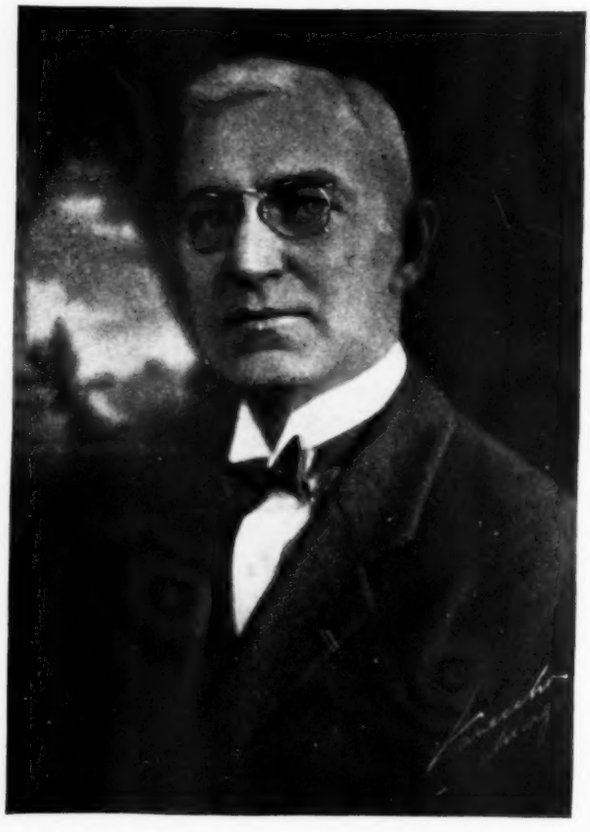
A summer session in public health will be held again this year at the University of Michigan sponsored by the U. S. Public Health Service. It will be held this year from June 22 to July 31. Twenty courses to meet the demands of public health workers and those who anticipate careers in public health will be conducted by members of the faculty of the University of Michigan and special instructors of national reputation.

CHANGE MEETING TO GREENSBORO

The annual meeting of the North Carolina Hospital Association will be held at Greensboro, May 13-14, at Hotel O'Henry, according to the latest announcement of the executive committee. It was formerly planned to have the meeting at Pinehurst. Definite plans for the program have not yet been arranged.

HEALTH PROMOTION WEEK

The week from April 26 to May 2 has been proclaimed as Health Promotion Week in the state of Illinois. This will permit the state, in common with other states, to celebrate May Day and Child Health Day.



Dr. William H. Walsh, who assumed his new duties March 1, as executive secretary of the American Hospital Association.

UNIFYING HEALTH AND HOSPITAL SERVICE*

By LUCIUS R. WILSON, M.D., Assistant Superintendent, Barnes Hospital, St. Louis, Mo.

MUCH time has been spent solving the health problems of cities and good results are constantly reported. There is room for more work along these lines in the cities, but with the start already obtained it is safe to assume that the work there will carry on from its own momentum. Just the opposite condition is found in the country where, with few exceptions, very little work has been done.

The need of the country districts is exemplified by a county of about 30,000 population, with which I am acquainted. It embraces one entire county of 1,000 square miles. Here agriculture is the chief means of livelihood, with mining, manufacturing, and small business enterprises, constituting the remaining sources of employment. The people are of all walks of life, from the illiterate foreign laborers to the well educated, moderately well-to-do class. The majority, however, are intelligent hard working country people.

No Hospital Bed Within 30 Miles

Their health is looked after by thirty-six physicians, several of whom have reached the retiring age but are prohibited from giving up their work by the lack of doctors to take their places. Many recent graduates in medicine have settled in certain localities in this county and their number, while not nearly sufficient, is large enough to form a nucleus around which a good medical organization could be built. There is not a hospital bed within a radius of thirty miles and most of the cases that receive institutional care travel seventy miles to a large city.

Here public health is never thought of. Conditions are such that an epidemic could easily become widespread with no means of checking it. Only two of the towns have water systems and only about one-half of the population uses this advantage. Many other situations which endanger health are common affairs.

Conditions in this county are typical of many other communities and are not due to the inhabitants being unmindful of their health, but to the fact that they see no salvation and continue their lives hoping that nothing will happen.

The three major needs in this particular community are: 1. More medical help; 2. hospital beds and organizations for carrying on hospital work; 3. Public health work.

The first two problems are so closely related that the solution of the one can hardly be obtained without solving the other. The group of physicians who have this large community to care for feel keenly the need and lack of facilities for caring for their patients. Many of them are especially trained in internal medicine, surgery and other branches of medicine but sadly need facilities to put their knowledge into effect. Upon their shoulders must fall the task of at least starting a movement to remedy the condition and probably of carrying it on.

Hospital Is Primary Need

If an adequate hospital were built it would be a magnet to draw other physicians to this locality. There are many young men recently out of medical school who are not adverse to living in the rural districts, but they are unwilling to sacrifice their training to the extent of locating where they will not have the opportunity to care for their patients as they feel they should. With some effort on the part of the local medical profession young men could be enlisted as interns in the community hospital, and most likely a number of them would see an opportunity to remain permanently after their training was completed.

Secure All-Round Cooperation

In this particular state provisions have been made whereby a county can bond itself to build hospitals. This seems to be the best means of obtaining one here, but it would mean an active campaign. The medical profession realizing the need of health facilities must take the initiative, and to start the campaign should present the situation to the most prominent citizens and secure their cooperation.

These representative men and women could form a committee to draw up a plan of campaign. There are ten weekly newspapers in the county and all of them stand for community improvement. They could be enlisted in the cause. As health and righteousness go hand in hand, the ministers also could be prevailed upon to help. Meetings could be held where public speakers could outline the need for a hospital. Appropriate posters could be used to advantage. Every local organization, such as the chamber of commerce, should be drafted.

Obtaining the finances is most important, but other things must be well considered before a hospital is built. Chief among these should be listed selection of board of trustees, appointment of the superintendent, kind of patients to be cared for, location of the hospital, its size, and its equipment.

The first board of directors to be appointed by the county court should be selected from the men and women who started the hospital movement and who have informed themselves along hospital lines. Politics should be kept out. This body should at a very early date select a superintendent, probably a nurse experienced in hospital management, and have this officer on the job during the construction and equipping of the building.

Hospital Should Be Centrally Located

The population under consideration is evenly distributed. Two railroads cross the county from east to west. One is followed by a concrete highway under construction. Two secondary hard surface roads will soon be built from north to south. The location of the hospital should be at the nearest point of intersection of these lines of travel, which would also be near the center of the county.

It is commonly accepted that for general diseases it is necessary to have five beds per 1,000 population. Such a ratio would come near meeting the requirements of this community after the people had become educated to the advantages of a hospital. At first a one hundred bed hospital, with plans for growth as the future demanded, would be sufficient.

A one hundred bed hospital built in the country where certain labor and materials are cheaper than in the cities could be built and furnished at a cost of about $350,000. To take care of this the low tax of two mills or $2 per thousand would suffice. This tax in this particular county

*Essay awarded second prize in THE MODERN HOSPITAL Publishing Company's essay competition on "The Interrelationships of Hospital and Community," which closed November 1, 1924.

would raise about $75,000 per year. Of this amount about $25,000 per year would be needed to cover interest and to form a sinking fund. The remaining $50,000 could be devoted to maintenance and paying off bonds. If $20,000 per year were used to pay off the bonds $30,000 would be available to take care of current expenses. This amount with the revenue derived from the patients should place the institution on a substantial foundation. The law provides for the acceptance of gifts to be used for special purposes and this in time might amount to a considerable sum.

Draw on Medical Society for Staff

There is an active medical society consisting of all capable and ethical physicians in the county. These men should be appointed to the hospital staff by the board of trustees and should be organized under a chief for each department. These chiefs should form a staff committee to attend to all staff matters and make proper recommendations to the board of trustees.

The diseases to be cared for, with the exception of mental cases, will be all-embracing, including acute and chronic conditions, obstetrics, pediatrics, tuberculosis, venereal and contagious diseases. The county already has arrangements whereby mental cases are sent to a state institution forty miles distant. The community hospital should fully cooperate with the state institution by taking suitable cases for observation and then sending them on to the sanitarium if found necessary.

A reliable survey of the conditions must be made and only the equipment necessary to care for those conditions secured. If an attempt is made to anticipate future needs, the graveyard of discarded equipment will be increased out of all proportion. A laboratory equipped to do biology, serology, chemistry and pathology is necessary. An x-ray department is badly needed as there is not an x-ray outfit within a radius of twenty miles of the county. This department could be under the supervision of a staff member but an x-ray technician would be needed. The furniture and other equipment should be ample and substantial, comfort and care of the patient being the guiding factors.

Very closely connected with the equipment of the hospital is the question of heat, light, power and water. A private power and heating plant should be installed; water could be obtained from deep wells, or if the institution were located in a city with water works, these could be taken advantage of. Maintaining a private plant is usually an economy and is far more satisfactory as all phases of this work, including refrigeration, can be taken care of.

Small Pay Clinic Desirable Offshoot

While the people are not unusually prosperous, yet there would be need of very little charity work. There is plenty of employment, and though the wages are not particularly generous the poorer classes as a rule will be able to pay something and wards should be supplied for them. The few patients who will be entirely dependent on charity can be looked after by local charitable organizations and the hospital, working together.

In this community, as everywhere else, there will be cases which need proper care and advice but not necessarily hospital treatment. The number of these will not be large but arrangements should be made for their care. A pay clinic run adequately on a small scale by the resident and visiting staff would meet the requirements. This department should take care of cases previous to their entrance into and after their discharge from the hospital, as well as cases who do not need hospital care. The work would not require over two or three hours each day and could be carried out in the hospital's examining and dressing rooms until a time when larger provisions became necessary.

A hospital does not begin to give its fullest service to the community if its work is limited to caring for the sick and afflicted. In recent years it has taken on many other functions, chief of which is the training of nurses and doctors. Mention has already been made of the intern staff but it may be remarked here that good men can be obtained for this position only where good training is offered. The management of the hospital and its staff should, therefore, be constantly on the alert to supply this need by strict attention to patients, careful diagnoses, thorough treatment, accurate records, constant supervision, regular conferences and visits from outside clinicians and consultants.

Establish High Standards in Training School

A school of nursing should by all means be established. This should not be founded with the idea of obtaining cheap labor, as the employment of training school students versus graduate nurses from the standpoint of economy is a debatable question. The school should be developed with the view of enabling the hospital to come nearer fulfilling its duty by offering this education to the community. There are several girls from this county alone who enter this field each year, and there are many accredited high schools and one junior college in the vicinity from which many girls graduate who could readily be directed to the nursing profession.

The superintendent of nurses should be selected at an early date and every form of cooperation given her in the organization of the school. Talks, explaining the value of the nursing profession should be given in the high schools and literature on the subject distributed. The first class will be small but if the proper effort is exerted the classes will increase in size from year to year. While the training school is passing through its embryonic stages, graduate nurses and ward helpers will be needed to supplement the work of pupil nurses.

A training school for nurses can succeed only when established with high standards. For this reason the requirements should be a four year high school diploma or its equivalent and recommendations as to character, ability and physical and mental health. The course of instruction should be thorough and should meet the requirements of a class A teaching institution. If certain phases of the training cannot be properly taught in the community hospital, this deficit could be met by affiliating with some other school.

Train Nurse in Social Service Work

Social service and visiting nursing must be done if the county is to derive the maximum benefit from the hospital. One nurse with social service training could do invaluable work. Her time, performing these joint duties, would be fully occupied and with the institution's growth other workers would be needed. The pupil nurses should be given an opportunity to do work in this field as part of their training. The social service duties would consist of investigating the patient's home conditions and bringing the necessary aid to correct bad environments, follow up work enabling the physicians to administer proper medical care, and endeavoring in all ways to restore the patient as a useful unit to the community. The visiting nursing should cover prenatal and postnatal work, bedside nursing of all kinds, and proper instruction

and supervision along the lines of hygiene and medical care. An automobile would be needed to cover the mileage.

Public health in this community is as important as any other problem. At present this work is cared for by one nurse maintained by the Red Cross. Other workers are badly needed. A physician supported by the county should be in charge of this department. Working under his direction should be two nurses, and provision should be made for increasing the personnel in accordance with the department's growth. Close contact should be maintained between the county health organization and the state board of health.

Duties of Public Health Department

To outline a health program the vital statistics should be carefully studied. This will give a gauge of births, deaths and communicable diseases. In a population of 30,000 there are about 750 births per year, 2,000 preschool children and 6,000 school children. All these factors have a direct bearing upon the program.

The duties of the health department will cover (1) the inspection of water supply, sewage facilities, public buildings and waste disposal; (2) analysis and inspection of food, milk and drugs; (3) control of communicable diseases by reporting, quarantining and tabulating these diseases, including tuberculosis and venereal diseases; (4) proper instruction to the sick together with the well; (5) accurate tabulation of vital statistics; (6) supervision for the care of the sick; (7) general hygiene, including prenatal instruction, natal care and child clinics; (8) school hygiene consisting of medical and dental inspection, correction of defects and health education; (9) public health nursing; (10) public health education by means of talks, lantern slides, motion pictures and literature. The hospital could render material aid with its laboratories and other facilities.

The entire plan as outlined is large and could not be forced at once upon the community. Its development would require time and energy but when accomplished would declare large health dividends.

THE NEED FOR EFFICIENT METHODS OF HOSPITAL ACCOUNTING

Many of our hospital administrators object to stress being placed upon the accounting phase of hospital operation. There seems to be a general belief that figures in themselves are not expressive of results. While it is not presumed to suggest that an analytical study of the balance sheet will be the sole index of the hospital's performance, still it is the author's conviction that a properly established accounting department will be of inestimable value to the administrative office, not only in the operation of the institution, but also in gauging for the superintendent the relative efficiency of the work, assuming, of course, that in evaluating the financial figures there is also taken into consideration the vital and professional records.

Therefore, while it is not suggested that the accounting system of the hospital is all-inclusive in an evaluation of the service of the institution, it is a very important phase of operation. By stressing its importance to a greater degree than has been done in the past, the proper functioning of this department will force a realization of its value, with a consequent increase in the efficiency of the institution's work.—"Accounting and Budget Control in Hospitals," by Mr. Frank E. Chapman.—THE MODERN HOSPITAL YEAR BOOK, fifth edition.

HIS FIRST RECOLLECTION

(Apologies to Tom Hood)

I remember, I remember,
The ward where I was born,
The doorway where the intern
Would tiptoe in at morn,
The tag they tied upon me
To guard against a mix . . .
My cradle number—lemme see . . .
Ah, yes! 'Twas 36!

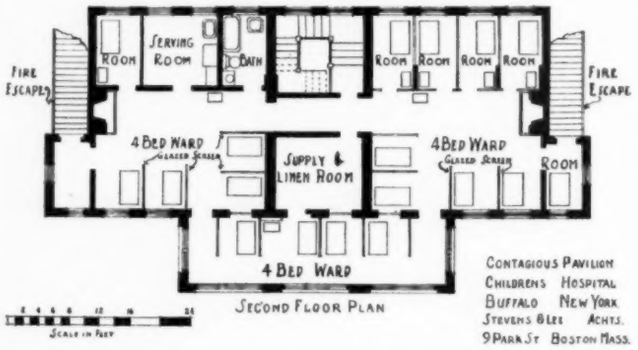
An octet of the Ohio Valley Hospital, Steubenville, Ohio, whose members are all under one week old.

ADMITTING DEPARTMENT OF BUFFALO CHILDREN'S HOSPITAL

By EDWARD F. STEVENS, F.A.I.A., Stevens & Lee, Architects, Toronto, Ont.

THE name of Pasteur is almost a household word. When we think Pasteur we think asepsis, for it was he who taught us much of what we know about present-day methods of aseptic surgery and the application of those methods to preventive medicine. Great credit is due to the names of Martin in France and Chapin in the United States for their development of the principles taught by Pasteur.

This principle of aseptic technique is being used extensively in the admitting department of children's hospitals and in children's departments of general hospitals. Not to plan for such an admitting department, where children can have the careful supervision of the trained nurse and where these principles of aseptic technique can be applied, is a grave error.



At the Pasteur Hospital in Paris each case is isolated in a single room shut off from the corridor. In every room is provided water for washing the hands and a drain for emptying the portable bathtub. In the admitting department of a children's hospital the principle of isolation may be accomplished by the separation of the beds by permanent screens. Thes eshould extend to the floor and wall, and a few feet beyond the bed or crib, thus producing an effectual barrier between one bed and another.

The next essential provision is the placing of scrub-up basins within convenient reach of each bed, making it easy for the nurse to take the proper scrub-up precaution before passing to the next patient.

For a case which may develop a communicable disease a special section of the admitting department, composed of small rooms or cubicles set apart for this treatment, should be provided.

Provision should be made for individual serving of food and for sterilization of all utensils used about the patients.

All plumbing fixtures should be so planned that they may be operated by elbow, knee or foot control, leaving the hands, which have been in contact with the patient, free until the time for scrubbing up before going to the next patient.

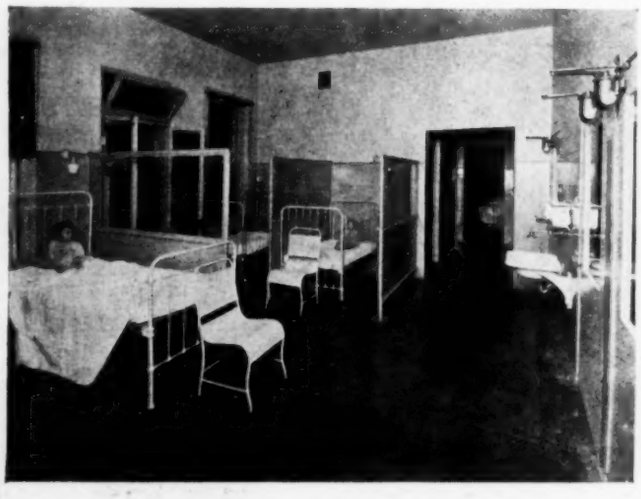
The accompanying plan and photographs show how this principle has been carried out at Buffalo Children's Hospital, Buffalo, N. Y., using a portion of the old contagious building. Existing partitions were preserved as far as possible, the old airing balcony was brought into requisition for extra cubicles and the two old sections of the second story brought into one.

To this section all patients entering the hospital are first brought. They are studied, treated and, after the incubation period, transferred to the proper department of the hospital.

"The war has, of course, changed our outlook on most things, but with regard to the children's question, the change is to make one realize even more intensely the dominating importance in national life of all that affects the child. Only care of childhood can give us adult men of that force and vigor which is latent in the race, but which often bad conditions deform or suppress."—*Dr. L. Haden Guest.*

A. H. A. TO MEET IN LOUISVILLE, KY.

The twenty-seventh annual conference of the American Hospital Association will be held in Louisville, Ky., the week of October 19-23, 1925, according to the announcement just made by Dr. William H. Walsh, executive secretary of the association. The exposition and sectional meetings will be held in the Jefferson County Armory, and the headquarters will be at the Brown Hotel.



View of the Children's Admitting ward of the Buffalo Children's Hospital, Buffalo, N. Y.

Another view of the admitting wards showing screens which separate cubicles.

ESSENTIALS IN A HOSPITAL APPROVED FOR INTERNS*

A LIST of the hospitals that furnish acceptable internships for medical graduates was published by the Council on Medical Education and Hospitals of the American Medical Association in 1914 in response to a growing demand for such a list for the guidance of medical graduates and others seeking a year or more of hospital experience. The council has revised its list of approved hospitals year by year, stressing fundamental requirements for proper intern service in hospitals. By 1919[1] these principles were sufficiently evolved so that they were published by the council under the heading "Tentative Schedule of Essentials in a Hospital Approved for Interns."

The object was to provide, along with the safe and proper care of patients, an intern service that would place the intern year, or fifth year in medicine, on a basis consistent with the standards already in effect for the four years in medical college, and at the same time make the intern service of greatest possible value to the hospital itself. The tentative schedule was prepared with the cooperation of a large number of competent authorities on hospital work and has been the standard by which hospitals have been judged by the council for its list of hospitals approved for internships. Recently the schedule has been carefully revised with the cooperation and suggestions of a large number of persons interested in hospital internship, including the intern committee of the American Hospital Association. The result is the present "Essentials in a Hospital Approved for Interns." In its first paragraph it stresses the welfare of patients as the first object of all hospitals.

The essentials at present admit only general hospitals that are in position to furnish a well-rounded internship, such as is required by the ten medical colleges that now require a year's internship for graduation and the twelve state boards in which an internship is an essential for the license to practice. In accordance with the trend of medical education, however, the council issues also a list of hospitals that provide approved residences in the specialties for graduates who have already completed a general internship.

I. General Statements

1. Welfare of the Patients.—Only hospitals in which the entire plant and personnel constantly function primarily in the interest of the patient are acceptable for accrediting as institutions for the training of interns, however abundant the equipment of the hospital may be.

2. Minimum Number of Beds and Patients.—The hospital should have at least 100 beds and an average of seventy-five or more patients.

3. Only General Hospitals Eligible.—The hospital shall provide a variety of medical, surgical. obstetrical and children patients in reasonable proportion, so as to offer interns and graduate students that clinical training which every medical practitioner should have. A hospital that is lacking in types of patients, such as maternity cases or children may, by an approved working affiliation with other nearby institutions, supply the additional clinical material necessary. The rotating service is recommended, but teaching hospitals of high grade and reputable medical schools which have long followed the straight service should be permitted to continue that method without prejudice.

4. Interns' Living Quarters.—The hospital shall provide reasonably comfortable living quarters for the interns with opportunities for recreation, both indoor and outdoor, appropriate to the locality and environment of the hospital.

II. The Staff of the Hospital

1. Character of Staff.—There must be an organized staff of ethical physicians who hold the degree of doctor of medicine from acceptable medical schools, who are of unquestioned professional and moral integrity; who are proficient in general practice or in the special fields to which they devote themselves; who give personal attention to the patients under their charge, and who will provide adequate facilities, instruction and that sympathetic cooperation without which interns and graduate students cannot obtain the practical training for which they are serving the hospital.

2. Graduates in Medicine.—The hospital must not only confine membership on its staff to reputable practitioners who have received the degree of doctor of medicine from medical schools considered acceptable by the Council on Medical Education and Hospitals of the American Medical Association, but also must apply this ruling to every person permitted to treat or prescribe for the sick in the hospital or in any of its departments. The ruling does not apply, of course, to the treatment of patients by nurses, masseurs and other similar assistants, when acting under the orders of any physician on the attending staff.

3. Resident Physicians.—It is desirable, in all instances, and required in hospitals with four or more interns, that there be one or more full-time resident physicians who have had at least one year's intern experience, whose duties shall include cooperation with the members of the staff in supervising the work and instruction of the interns and graduate students. Residents, however, must not be actually substitutes for the staff physicians, who shall individually be responsible for the intern's welfare, instruction and practical training. The interns themselves, however, should assume responsibility for the examination and treatment of patients while they, in turn, are under the supervision of the staff physicians of the hospital.

4. Staff Conferences and Meetings.—It is expected that there shall be, at least fortnightly, clinical-pathological conferences or other regular staff meetings at which histories and clinical findings in selected patients may be reviewed and particularly where, in the death of patients, special study, including autopsy findings, when possible, shall be undertaken. The interns and graduate students should be requested to attend these meetings and to take part in the discussions and procedures.

III. The Equipment of the Hospital

1. Laboratory.—There must be a clinical laboratory in charge of a pathologist of attainments and standing at least equal to those of other staff members, who shall be in charge of the laboratory, supervise the work of, and give instruction to the interns. The laboratory work of the interns shall include not only the simple clinical tests, but also the more technical chemical, bacteriologic and serologic work and examinations.

2. Roentgen Ray.—The roentgen-ray department shall be in charge of a roentgenologist whose attainments are at least equal to those of other staff members and who shall supervise and instruct the interns in all essential phases of roentgenology. The department must be

1. Prepared by the Council on Medical Education and Hospitals of the American Medical Association.

equipped to do roentgenographic, fluoroscopic, and therapeutic work. The intern should receive instruction both in regard to the technic and dangers of roentgen-ray application and also in plate reading and in the therapeutic uses of the roentgen ray.

3. Anesthesia.—The hospital is expected to provide equipment and facilities for, and expert supervision, preferably by a staff member, over the administering of the usual kinds of local and general anesthetics and the instruction of interns in anesthesiology.

4. Medical Library.—There shall be a working medical library, in charge of a librarian, which should contain a useful selection of late editions of standard text and reference books and current files of not less than ten of the better medical journals. The library should be inside the hospital building and located where it is readily accessible to the interns and staff members. Collection of choice reference books in pathology and clinical diagnosis and in roentgen-ray work should be found in the pathologic and roentgenologic laboratories, respectively.

IV. Histories and Records

1. Complete Histories.—There must be complete histories, giving the patient's complaint, physical examination at time of admission to hospital, preliminary diagnosis, laboratory findings, description of operation, if any, daily record of case, final diagnosis, condition and date when discharged from hospital, end-results, and in case of death, necropsy findings, if necropsy is performed.

2. Endorsement of Histories.—The histories should show, by signatures or initials, all persons writing them or parts of them, as well as the staff members by whom the histories are verified. Likewise all orders and progress notes should be initialed or signed.

3. Records.—The records should be in charge of some competent person, preferably a trained office secretary; they should be kept complete and should include an alphabetical index of the patients, and another arranged by diagnoses, and the record should be so filed as to be easily accessible from either index.

V. The Work of the Intern

1. Supervised Responsibility.—The intern should assume, under careful supervision, an increasing responsibility in the diagnosis of diseases, daily observation, care and treatment of the patients under his service.

2. Type of Intern Service.—In the rotation service there should be a smoothly working plan by which interns proceed in a certain routine through the various services. There should not be more than four or five changes in any single year's service; more than this cause unnecessary confusion.

3. Scope of Intern Instruction.—The hospital, through designated members of its staff, should provide adequate instruction and experience for the interns who, in effect, are fifth year medical students, in medicine, pediatrics, surgery, obstetrics and laboratory work throughout their terms of service. For the development of any physician in general practice the importance of a thorough training in pediatrics and obstetrics is especially emphasized.

4. Length of Intern Service.—The intern service should cover at least twelve months, and may to great advantage be extended through a longer period.

5. Assignment of Work.—The number of patients assigned to each intern and the routine work required of him should not demand more than eight (at most, ten) hours daily. He should have ample time not only to study and read up about his patients, but also to permit of a reasonable amount of recreation.

6. Grading of Intern Service.—In larger hospitals, or those having four or more interns, the interns may, with advantage, begin their work at different times of the year and pass through junior and senior services, or the services may be further subdivided into first and second junior and first and second senior services.* Through some such arrangement the hospital retains a constant supply of experienced interns. The training of the intern is enhanced thereby, since junior interns will secure considerable instruction from the seniors.

7. Clinical Laboratory Work.—The intern should himself perform the laboratory work, or at least have the full benefit of laboratory findings for each patient under his charge. A reasonable amount of work in the various laboratory tests—urine, blood, gastric contents, stools—should be performed by the intern to give him the desired amount of laboratory experience, but he should not have to undergo an unreasonable amount of routine work. Laboratory experience in the more technical, chemical, bacteriologic and serologic work may well be obtained in assisting the expert pathologist.

8. Necropsies.—The intern, as far as possible, should obtain experience in making necropsies under the direction of the pathologist. The hospital also should obtain as high a percentage of necropsies as is possible. This percentage is usually looked on as an index of the pathological teaching carried on as well as of the general professional standard in the hospital.

9. Anesthesia.—The intern should obtain instruction and experience in the various kinds of anesthetics, under experienced medical supervision, unless he is known to have had adequate instruction in his undergraduate medical course.

10. Obstetrics.—The intern should have experience, under the supervision of designated members of the staff, in the delivery of normal maternity patients and also in assisting in all abnormal cases.

11. Roentgen Ray.—The intern should receive from the roentgenologist or other qualified member of the hospital staff a reasonable amount of instruction in the technic and the therapeutics of the roentgen ray, as well as in the interpretation of plates and fluoroscopic findings.

12. Dietetics.—The intern should receive some instruction by a qualified staff member, in the feeding of both infants and adults, as required in various diseases or conditions, and a reasonable amount of technical experience under a trained dietitian is desirable.

13. Rules Regarding Interns.—The hospital should have a set of printed or written rules and regulations defining the rights, duties and privileges of the interns, a copy of which should be furnished to each intern.

14. Purpose of Internship.—It is emphasized that the object of the general internship is to round out the medical graduate's training, so as to enable him to enter on the general practice of medicine and not to equip him to enter directly on any specialty. For the latter he should obtain further and different instruction.

15. Faithful Service from Intern Expected.—For all the privileges granted the intern it is understood, of course, that the hospital has the right to expect faithful service in return.

VI. Admission to the Approved List

1. Application for Approval.—Hospitals that want to be accredited for intern training, either as general or special hospitals, should apply to the Council on Medical Education and Hospitals of the American Medical Association,

*See appendix.

535 North Dearborn Street, Chicago.

2. Survey Report.—A hospital survey report blank in duplicate will be supplied on application. This should be filled out carefully by the superintendent or by some staff member who is acquainted with the intern service in the hospital. In addition, the council desires also: (*a*) a list of all physicians who practice in the hospital; (*b*) an outline of the course, or order, in which the intern progresses through the different departments, and (*c*) the name of responsible instructor, length of time and amount of work required of the intern in each department.

VII. Internships in Special Hospitals

1. Residencies.—It is hoped that hereafter all internships or residencies in the specialties, whether offered in special hospitals or the special departments of general hospitals, will be open only to those physicians who have already completed an internship in a general hospital or have obtained its full equivalent in general practice. The turning out of amateur specialists should be discontinued.

APPENDIX

Suggestive Schemes for the Rotation Service

These plans are submitted for their suggestive value only. The hospitals are free to adopt them, to modify them or to adopt other plans for rotation so long as the principles in the above outline are observed.

Plan 1

The following is suggested for a general hospital of 100 beds with four interns, two entering January 1 and two July 1, and serving three months in each of four services or a total of twelve months, as follows:

		A	B	C	D	Etc.
First	3 months.....	Lab.	Obs.			
Second	3 months.....	Surg.	Lab.			
Third	3 months.....	Med.	Surg.	Lab.	Obs.	
Fourth	3 months.....	Obs.	Med.	Surg.	Lab.	
First	3 months.....	Lab.	Obs.	Med.	Surg.	
Second	3 months.....	Surg.	Lab.	Obs.	Med.	etc.

Plan 2

Intern service in hospital of 200 beds having departments of medicine, two divisions of surgery, obstetrics, pediatrics and laboratory. There are six interns, three coming in January and three in July, and spending two months in each of six services, or a total of twelve months, as follows:

		A	B	C	D	E	F
First	2 months.	Lab.	Med.	Surg. 1	Surg. 2	Obs.	Ped.
Second	2 months.	Ped.	Lab.	Med.	Surg. 1	Surg. 2	Obs.
Third	2 months.	Obs.	Ped.	Lab.	Med.	Surg. 1	Surg. 2
Fourth	2 months.	Surg. 2	Obs.	Ped.	Lab.	Med.	Surg. 1
Fifth	2 months.	Surg. 1	Surg. 2	Obs.	Ped.	Lab.	Med.
Sixth	2 months.	Med.	Surg. 1	Surg. 2	Obs.	Ped.	Lab.

Plan 3

Intern service in hospitals of 300 beds having departments of medicine, two surgical divisions, obstetrics, orthopedics and pediatrics, and laboratory, with twelve interns beginning each July, serving twenty-four months, and spend two months in each of six services, or twelve months as a junior and a senior during the next twelve months. There is also a resident, who serves a third twelve months or longer.

		A	B	C	D	E	F
First	2 months.	Ortho.	Med.	Surg. 1	Surg. 2	Obs.	Ped.
Second	2 months.	Ped.	Ortho.	Med.	Surg. 1	Surg. 2	Obs.
Third	2 months.	Obs.	Ped.	Ortho.	Med.	Surg. 1	Surg. 2
Fourth	2 months.	Surg. 2	Obs.	Ped.	Ortho.	Med.	Surg. 1
Fifth	2 months.	Surg. 1	Surg. 2	Obs.	Ped.	Ortho.	Med.
Sixth	2 months.	Med.	Surg. 1	Surg. 2	Obs.	Ped.	Ortho.

Plan 4

A general hospital of 260 beds, of which ninety-one are surgical, forty-five medical, thirty pediatric, twenty-six obstetric, and sixty-eight mixed. There are eight interns, four of whom enter July 1 of each year for an internship of two years. There are eight services of three months each, as follows:

1. Laboratory.
2. Gynecology and genito-urinary.
3. Women's surgical, children's surgical, orthopedic and eye.
4. Women's medical and children's medical.
5. Men's medical and medical chiefs off duty.
6. Men's surgical and surgical chiefs off duty.
7. Receiving ward, ambulance and dispensary.
8. Maternity and nose and throat.

Plan 5

A general hospital of 300 beds, of which 100 are surgical, 150 medical, fifteen obstetrical, and thirty-five pediatric. There are nine interns, each intern changing services every three months, going through the services in the following order:

1. Eye, ear, nose and throat, anesthetics.
2. Pediatrics, neurology, psychiatry, poisons, tuberculosis, contagious diseases.
3. Junior medicine: one-half time in laboratory, genito-urinary, proctology; relief on obstetrics.
4. Senior medicine, including supervision of medical service and obstetrics.
5. Junior surgery: emergencies, gynecology. Second assistant at all operations. Relieves senior surgery.
6. Senior surgery: First assistant at all operations. Minor and major surgery under staff supervision.

Plan 6

A city general hospital has 500 beds, of which approximately 200 are surgical, 250 medical, and fifty obstetrical. There are altogether twenty-one interns, three of whom enter every quarter and remain for twenty-one months. Each group begins in the department of medicine and progresses every three months through the following services:

1. Medicine.
2. Surgery.
3. Ambulance and emergency.
4. Assistant house surgeon.
5. House physician.
6. House surgeon.
7. Specialties, including genito-urinary, gynecological, obstetric and eye, ear, nose and throat.

PHYSIOTHERAPY NOW AN ESTABLISHED PART OF THE HOSPITAL

It is an axiom that the modern hospital moulds public medical opinion, but it is true also that public opinion at times demands that hospitals equip themselves with methods for treatment that, by practical experience, have proved to be of value in the relief of pain and in the treatment of disease.

The treatment of disease by physical measures is as old as medicine itself and we have all used some of these measures from the earliest days of our practice in a half-hearted way, but we have hesitated to adopt physical therapeutics as a part of out therapeutic armamentarium and have left its exploitation to the quack and irregular practitioner. Who is there among us that has not at one time or another lost patients to those irregulars and experienced the chagrin of being told that the method of these practitioners has achieved a cure where we have failed?

It is the history of all military hospitals with physiotherapy departments, that the return of men to the service was 30 per cent greater than from hospitals where physical methods were not employed. Modern physiotherapy was not developed as a specific for any one type of disease or surgical condition, but for its capability of affording the means for benefiting a very wide range of conditions. It takes cases in association with the internist and surgeon on the basis of a fully established clinical diagnosis and with full understanding of underlying pathology as a therapeutic adjunct only.

PRINCIPLES OF HOSPITAL ADMINISTRATION FROM AN INTERNATIONAL VIEWPOINT*

By E. S. GILMORE, Superintendent, Wesley Memorial Hospital, Chicago, Ill.

PROPER consideration of the subject of the fundamental principals of hospital administration from an international viewpoint requires that a much wider survey be made of the conditions than time will permit. It seems best, therefore, to limit the paper to what appears most important. First among these are the architectural features. In Europe, Asia, Australia, New Zealand, North Africa, Central and South America, the prevailing type of hospital is a low building, often adobe and usually of one or two stories. This kind of building formerly characterized our North American hospitals, since the United States obtained its ideas of structure very largely from Germany, while Canada's came from her mother country.

Some advantages prominent in such a type of building are an abundance of sunshine and ventilation, the absence of expensive elevators, and a minimum of fire danger. In Japan, until very recently, low buildings alone were considered practicable because of earthquakes, but they now are building reinforced concrete structures of several stories. In tropical countries low buildings seem to be most suitable and doubtless in such regions a hospital building of several stories would be inadvisable and probably uncongenial to its patrons. Satisfying the tastes, desires, and prejudices of the patient does much to speed his recovery.

Tendency Toward High Buildings

Throughout Europe, on the contrary, higher buildings have been appearing from time to time and there are now a number of conspicuous examples. In America, particularly in crowded cities, where ground space is difficult to obtain hospitals are being built much higher than formerly. Saint Luke's of Chicago, for instance, is a nineteen story building, which towers two hundred and sixty feet in the air. The obvious advantages of such a building are the primary saving in ground cost, freedom from noise, dirt, and insects in the upper stories and economy of management. Transportation by elevator is quicker and, therefore, more desirable than locomotion by foot. The increased cost of heavy construction in the lower stories is offset by a minimum for foundation and roof. With our present knowledge of contagion and disease carriers, isolation can be effected just as easily in high, compact buildings as in low, rambling structures. Segregation of the sexes and of particular diseases can be accomplished much more readily and efficiently. Modern fireproof construction, and, of course, that is the only kind that should be considered in hospital architecture, reduces the danger from fire practically to nothing. The skyscraper looms as large, therefore, both figuratively and literally in our special field as in commerce.

Varied Methods of Financing Hospitals

Great differences of opinions are found throughout the world regarding the methods of financing hospitals. The most frequent custom outside of North America, and it obtains quite largely with us as well, is maintenance in whole or in part by the state. In England the government supports most of the hospitals and patients go there without thought of paying for services received. The patient desirous of paying for service usually prefers to be attended at his residence or in an institution known as a "nursing home." If this is satisfactory both to the patient and the doctor, no objection could be made, provided the patient could get as good care in either place as in the hospital.

As a matter of fact, however, even a moderately equipped hospital is far better prepared for the diagnosis and treatment of disease than is a nursing home. Just why a man able to get the best when he is well should take less when he is sick is beyond my comprehension. The Frenchman believes that since he has paid taxes to support a hospital, there can be no good reason why he should not go there when ill. At the same time, application for admission to a hospital in France is generally considered as a confession of poverty. It is exceedingly difficult for a foreigner to enter a municipally supported hospital in Paris.

In Austria, notably in Vienna, the greatest importance attaching to the patient in the state supported hospitals is his value as clinical material. In the pay hospitals of New Zealand no inquiry is made of the patient's ability to pay until he is ready to leave. This bespeaks a high sense of unselfish service on the part of the institution but unless human nature differs greatly in New Zealand from that in this country, the hospital must suffer much unnecessary loss. In India the hospitals are supported or aided by the state but locally managed. The outpatient department comprises the largest part of the service. There is nothing inherently disadvantageous in state aid if it is not accompanied by state control.

Government Control Not Satisfactory

I believe experience has taught us, and taught thoroughly, that government control of hospitals is not conducive to the best interests of the patients. Local responsibility is more sensitive than distant responsibility. In North America, more particularly in the United States than in Canada, by far the largest part of hospital work is done in institutions where the patient is expected to pay his way, when possible. We also have our institutions supported by taxes of city or county or state. To be sure, our state hospitals are usually limited to mental cases but the principle is the same. By far the largest number of sick people either voluntarily or otherwise seek assistance in hospitals that are dependent for most of their income on the patients who patronize them. These institutions are usually chartered as "not for profit" corporations and no part of their income can accrue to the benefit of their trustees. Necessarily, therefore, an endowment must be sought for the maintenance of indigent patients. That these non-pay patients create a great strain upon American hospitals is shown by the fact that the expense incident to their care in 1923 approximated $100,000,000. This amount represented the actual cost to the hospital with no estimate of the value of the doctors' services, which at the very least must equal that of the hospitals. Each country, naturally, is going to follow its own ideas of benevolence and its own peculiar inclinations when providing for its sick poor.

In America the democracy coursing through our veins

leads us to care for the sick poor and the sick rich in the same or adjoining buildings, where each may have the benefit of the equipment designed for both and where each may have the services of doctors in whom experience and skill are ripened by professional attendance upon both. If this does not meet the mood of other nationals I might suggest that a better service than is given now could be brought about by the segregation of classes in different buildings or parts of one building, under one management and treated as one hospital. The affluent would then contribute to the care of the poor and at the same time their viewpoint would be broadened and enriched by a more than casual knowledge of the burdens borne by those not so fortunate as themselves.

What is a hospital? A hospital is an institution which provides facilities, including personnel, for the extending of medical and surgical assistance to the sick, for aiding and educating physicians, nurses, community organizations, and the public, and for investigating the cause and cure of disease and the methods of its prevention. To the degree only that a hospital meets all these functions is it fulfilling its mission. Service to humanity is the only legitimate reason for the hospital's existence. The sick can be cared for more successfully, more comfortably, and more economically if they can be gathered at one place, where proper personnel and facilities for the study, diagnosis, and treatment of their ailments can be focussed. This probably is the first duty of the hospital. Certainly it was in the belief that such was its function that hospitals had their foundation. We may not be actually cognizant of this until an emergency arises, out of which we ourselves become sick or injured and need the services of a specialized institution; then we rejoice that this scientific form of benevolence is kept ever in readiness for the moment of affliction.

The Secondary Purpose of the Hospital

Hospital people quite generally appreciate, and the public also is beginning to realize, that in the performance of its first duty the hospital can and should proceed to its second, namely, the aiding and educating of physicians, nurses, and community organizations as well as the public itself. A physician may be ever so wise, ever so keen, ever so industrious, and still be unable to do his best in his profession without the equipment and assistance which a hospital provides. His association under one roof with other physicians and their constant use of all hospital facilities teaches him constantly how better to perform his duties. For years nurses have received their sole training in hospitals. Universities and colleges are now being called upon to assist, but the greater part of the nurse's training must always be acquired in practical contact with the sick. In the prosecution of their relief work, community organizations continuously seek aid in the clinical advantages of our hospitals, while the public by its frequent visits to the institutions either as patient or friend is awakening to the realization of its dependence. It is in the wards and laboratories of the hospital that research in its various forms of study, reasoning, experiment, and trial is constantly endeavoring to ascertain the cause of disease, its cure, and prevention. Most of the progress made in the control of the physical scourges of mankind and in the mending of broken bodies has come out of the centralized experience of hospital practice. These are the underlying duties, principles, and fundamentals of such an institution, as I see them.

Fundamentals of Management

Let us look now more closely at some of the fundamentals of management in the individual institution. First, the control should be vested in a single head. Some of us have seen a two-headed calf. He was all right as a curiosity but not much of a success as a calf. A two headed hospital appears in much the same light. Theoretically and legally the board of trustees or managing board or board of directors or board of governors, that is, the board of final authority, by whatever name it may be called, is the virtual head of the hospital. It should delegate its authority to a single executive with full power to act for it when it is not in session. A division of authority with two or more heads reporting directly to the board and receiving instructions independently and acting more or less without regard for one another in the direction of different departments in the hospital is necessarily associated with friction, with irresponsibility and a retardation of progress. It is sand on the axles of efficiency.

Efficiency is indispensable, for hospitals deal constantly with life and death. It is essential, therefore, that every means for the attainment of this primary purpose should be provided and every method for checking up results should be employed.

Economy is another requirement. The World War taught European nations methods of economy in hospital management that will be valuable to them for all time and can be studied with profit by American executives. The war also has made European institutions less efficient than formerly but as the nations continue their advance to normal conditions all sanitary regulations will improve and eventually will attain to or even surpass their former standards. There should be no undue expenditure of money or its equivalent but, on the other hand, an economy which fails to provide the necessary equipment, whether material or human, for the accomplishment of the hospital's purposes is a false economy, which, unfortunately, is all too often practiced.

Loyalty Indispensable to Efficiency

There must be loyalty throughout the hospital—loyalty to the patient, loyalty to the governing board, the executive head, the medical staff, the nursing school, and the employees. A disloyal member of the household can give no end of trouble.

A well-organized and well-conducted school of nursing is indispensable to the success of the institution. This training school and the individuals connected therewith should expend their best energies in loyal service to the hospital and in return the hospital should contribute to the nurse the best professional education that can be had. It is a duty whereby, in turn, they both become equipped to give the best possible service to the patient. There should be no exploitation of the nurse. I quote from Mr. Edwin R. Embree, secretary of the Rockefeller Foundation: "The next great step forward in hospital care in continental Europe as well as the countries of the Far East must be in the training of nurses, in recruiting from higher social and intellectual classes in the development of standards, and the extension of nursing service." Isn't this a fair standard by which to guage the efficiency of a hospital anywhere?

An administrative intelligence which sees the need of a better nursing personnel and which provides for it not only gives better nursing care directly to its patients but also shows the possession of a mental grasp which will provide better medical and surgical attention as well. Nurses are human, although from the demands sometimes made upon them, one might well suppose them to be super-human. They respond to kindness, sympathy,

justice, and encouragement, even as you and I. I wish every executive might realize that the patients in his institution will get exactly the same kind of treatment from the nurses that the nurses receive from the management. If this were better understood our hospitals would deserve and would more often receive enthusiastic commendation from their patients than they do at present.

The Importance of Pleasant Surroundings

It is due the patient also that his surroundings should be as pleasant and comfortable as the finances of the hospital will permit. He is not institutionalized for punitive purposes. He is seeking restoration of health. Clean, cozy, comfortable surroundings should be his by right, partly because the hospital should do its share in the promotion of the esthetic but more because such surroundings aid in hastening the patient's recovery. Great progress has been made since insane people were chained to the wall and the sick body was placed in quarters repellant to a sensitive soul. Still greater changes are now taking place and the time is not distant I hope when hospitals will be so celebrated for their attractiveness that much of the aversion to them which exists among a large part of our people will be dissipated.

Sympathy Should Radiate from all Personnel

If ever a man is entitled to be babied it is when he is sick. His mentality is deeply affected by his physical condition. Sympathy, therefore, is a requisite to be demanded from every person in the institution. It should not be restricted to the nurses and doctors but should extend to the employees. Everyone, from scrub-woman to the president, should be imbued with the idea that kindness, gentleness, courtesy, and sympathy are as essential as the ability to perform his or her own kind of work. It is not necessary that the working force or the executive staff of the hospital should perish with the patient but it is highly desirable that sympathy should be so prevalent that every effort will be made to contribute to the comfort and the welfare of the sick.

The golden rule, the most fundamental principle that must support every activity of the hospital, is that the patients' welfare must be the first consideration. Any other conception is degrading to its possessor. It is for the patient alone that the hospital exists. It is his comfort and his relief that must be sought by all—by doctors, nurses, and executive staff, with every ambition that is best and highest in the soul of man. Teaching is one of the functions of a hospital; but it is not the first in importance. To train nurses to a superior excellence in the management of the sick is highly desirable and to train young doctors in the practical details of their profession is very necessary; but when a hospital is so conducted that the student's welfare rather than the patient's becomes the first consideration, then that hospital and that teaching force have woefully misconceived their mission and students trained by them will go into their life work lacking courtesy to the patient, devotion to human ideals, and that intense desire to ameliorate the suffering of others, which should be their profession's brightest adornment. Their attitude is the direct result of their contacts and a direct reflexion upon the teaching standards of the hospital.

Nations may disagree about what is best in the architecture, organization, and the methods of financing their institutions. They may honestly entertain diverse ideas of their duty to the community but there can be but one conception of the relation between the hospital and the patient. The hospital which does not place the patient's welfare first, above that of nurse, doctor, or executive staff, and does not emphasize this primacy in all its departments, is unworthy of the name it has so shamefully misused.

WHEN IS THE HOSPITAL TAX EXEMPT?

A private hospital may be exempt from taxation if organized and operated as a charitable institution. Charitable hospitals are usually declared exempt from taxation by the constitution or statutes of the state in which the hospital operates. If the income from the private pavilion inures solely to the benefit of the charitable hospital, then such pavilion is exempt from taxation if the rest of the hospital is exempt.

New York exempts the real property of an association to corporations organized exclusively for charitable, hospital or infirmary purposes, if no officer, manager or employee thereof receives pecuniary profit aside from reasonable compensation for his services. The New York law further provides that a lot or building actually used for hospital purposes "by a free public hospital depending for maintenance and support upon voluntary charity, shall not be taxed and to a portion thereof leased or otherwise used for purposes of income, when such income is necessary for, and is actually applied according to the terms of the statute, then that part of the property is not exempt from taxation. (Laws of New York, 1918, Ch. 288.)—*Journal of the American Medical Association, March 7, 1925.*

PUBLIC HEALTH SERVICE TO TEST TUBERCULOSIS TREATMENT

Tests are now being undertaken under the direction of the Hygienic Laboratories of the U. S. Public Health Service to measure the value of the "gold cure" for consumption, as developed in Denmark.

Investigations over a period of several months will be carried on to determine whether the treatment is effective and the results of this work will determine whether the health service will recommend to the treasury department that licenses be issued for the sale of the preparation in interstate commerce.—The *Nation's Health*, February, 1925.

BOOK OF PRIZE ARCHITECTURAL PLANS AVAILABLE

MODERN HOSPITAL readers, particularly those who are interested in the construction and equipment of the small hospital will find helpful the study of The MODERN HOSPITAL'S booklet of prize architectural plans which is available at the office of the company for $1 a copy. In addition to the prize and other plans, submitted in the architectural contest, all of which were published in the magazine during 1923, the booklet contains the report of the jury of award with critical comments of the plans and the reports of two special committees on the organization and equipment of the prize small hospital.

EVERGREENS IN HOSPITAL GROUNDS

By M. H. FOSTER, A.M., M.D., Surgeon in Charge, U. S. Marine Hospital No. 1, Baltimore, Md.

EVERGREENS, judiciously selected and planted, make a tremendous improvement in the appearance of any institution which has no shrubbery of this variety.

For ornamental purposes the evergreen has no peer when distributed among deciduous trees and bushes. It retains its foliage throughout the entire year and requires a minimum amount of attention in the way of pruning and cleaning up of fallen leaves. By planting different varieties pleasing contrasts in color can be obtained, and their growth is so slow that when they are properly placed the effect obtained will not be destroyed by an increase in size for a number of years, provided a moderate amount of trimming is carried out.

Ordinarily, plants lose their foliage in the winter, and their bare and barren stems are most unattractive. Evergreens, however, will always give a welcome touch of color, and even in times of snow and ice are an ornament to the landscape.

Before forming a plan to improve the grounds of a hospital a great deal may be learned by visiting well-kept institutions in the neighborhood, and noting the arrangements of evergreens; also by inspecting the better grade of private residences. Many nurseries, too, have specimen groupings of such trees and bushes already set out and these may be studied to great advantage. Valuable ideas may be obtained simply by being observant as one passes through the high-class districts of a city, or through the grounds of an estate or country place which presents and especially handsome appearance. In this way it is possible to find out what trees and plants thrive best in the vicinity in which the hospital is located. Nurserymen will usually give advice on this subject without charge, and will, if consulted on the matter, suggest appropriate treatments for the localities which it is desired to improve. Much interesting information can be gleaned from the catalogs issued by the large nurseries.

Formal Grouping of Plants Obsolete

The question of good taste enters very largely into the proper plan to select. No longer does the well-trained gardener set out his flowers or shrubbery in set designs. The practice of arranging colored plants to form a crown, coat of arms, star, or similar geometrical figure, is obsolete, as these groupings are artificial, and the highest form of art is to imitate Nature. Such formal designs were very popular for parks and lawns thirty years ago, but they offend every tenet of good taste and belong to the period of mounting diamonds in horseshoes, snakes, lizards or birds. Especially to be avoided is the trimming of trees or bushes into unnatural or fantastic designs. These may be triumphs of a gardener's skill, but there is nothing ornamental about them in the light of modern standards.

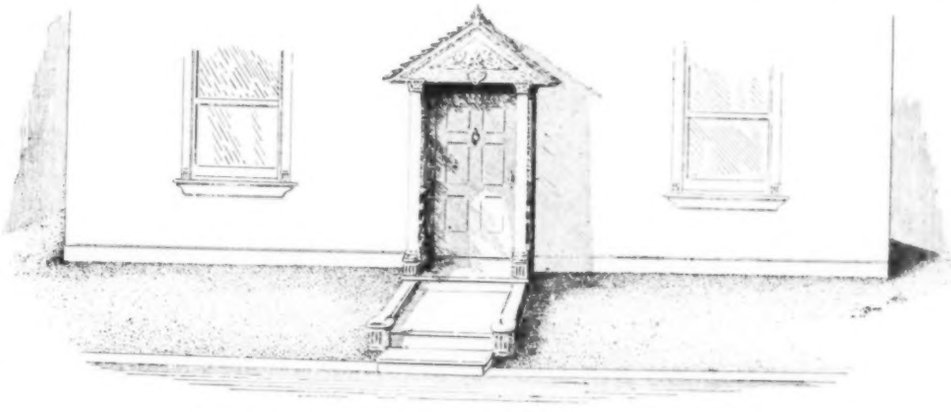


Figure 1. An undecorated doorway which has an austere appearance.

Evergreens should not be planted in straight rows or stiff patterns; the better method is to imitate their natural growth, arranging the trees in more or less irregular clumps or masses, duplicating such groupings, however, on each side of a building or roadside, so as to give a somewhat symmetrical design to the whole effect when viewed from a distance. In the grounds of every hospital are certain localities which strike the eye immediately, and these will come first to mind when considering how to improve the outside appearance. For convenience of consideration, they will be described under the follwing headings:

Suggested plantings to improve the appearance of the fronts of the most prominent buildings; distribution of evergreens throughout the grounds proper; attractive treatment of the main entrance gate and roadways, also

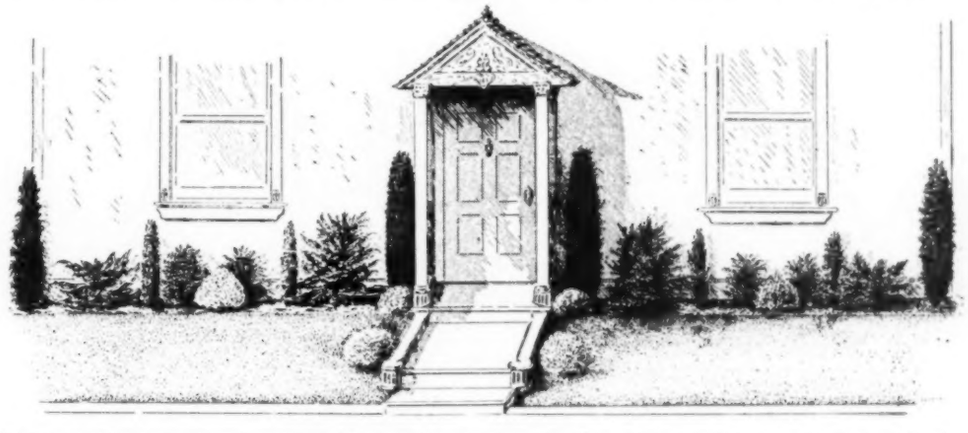


Figure 2. The trees above, enumerated from the doorway, to the corner, might be: Oriental arborvitae; Japanese holly; in front of the holly is a pfitzer juniper; Irish juniper; two Japanese holly trees or euonymous japonicus; the lightly colored bush in front is a peafruited cypress; then an Irish Juniper; a pfitzer juniper, and on the corner an Oriental arborvitae. The low specimens at each of the four corners of the concrete walk are dwarf pines.

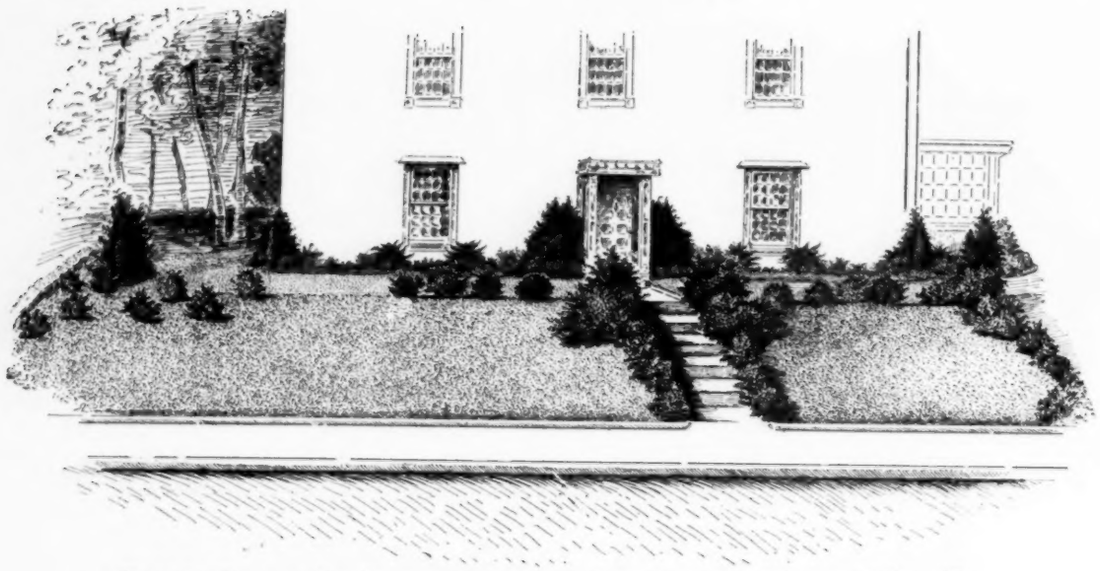


Figure 3. Here are attractive groupings of types of evergreen mentioned as not being stiff.

terraces alongside stone steps; varieties of evergreens to plant on shady banks, where grass does not grow well; the masking or concealing of ugly buildings, such as power plants, attendants' quarters, stables, barren banks.

How to Improve Front of Building

A solid mass of evergreens of a suitable size, grouped around the main entrance and in some cases extending along the entire front, will improve the appearance of any building one hundred per cent. It is usual to place tall, slender trees on each side of the main entrance; then smaller bushy trees are grouped around the tall trees, and still smaller varieties next to these, so that the green line dips down gradually from the highest point alongside the door. These trees are set close enough so that the foliage touches or blends together to produce a solid green bank up against the building.

Slender trees suitable for this purpose are the Oriental arborvitae, American arborvitae, which is slightly cheaper, and the red cedar, which is cheaper yet—but the trees are enumerated in the order of their beauty.

The improvement produced in the appearance of a building by a suitable planting of evergreens can be observed by comparing figures 1 and 2, and the general methods of arrangement in figure 3. In figure 2 the shrubs are set a little too far apart; this is an important matter. Much better effects can be obtained with a given number of plants by setting them in clumps so that they slightly touch, leaving a bare space in the center if necessary (see figure 5), rather than by spreading them out in a thin line with the result that the wall of the building can be seen between the branches. They should be planted close enough to afford a solid bank of green up against the base of the building. (see figure 4.) It is true that they will grow, but the growth is slow, and, if one desires to secure the best effect immediately, no great space can be allowed for expected increase in size. Later on some of the plants can be removed and set elsewhere if they begin to crowd each other seriously. They should be planted as close to the building line as is permissible, considering the nature of their growth. The smaller the tree, the closer it should be to the wall.

Trees planted near to buildings are likely to suffer from want of water, and special attention should be given to irrigating such plantings, especially when they have been first set out and during the dry seasons in summer.

At the end of the front of a building it is necessary to run the planting beyond and around the corner a short distance to secure the best effect. (See figures 3 and 4.)

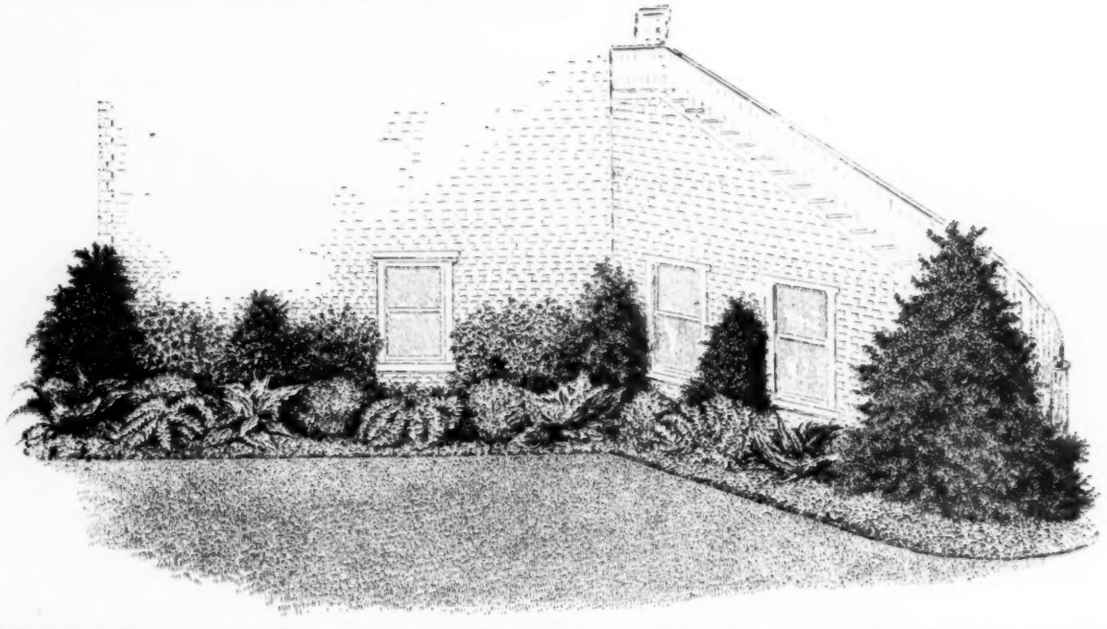


Figure 4. This shows an attractive treatment, especially for the north side of a building. The tall bushes on each end are Japanese holly (such a large growth requires a number of years). The next tallest three trees in the middle are American holly; adjoining these are some rhododendrons, and the still lower plants are drooping andromeda, etc. The low plant forming the border is Japanese spurge.

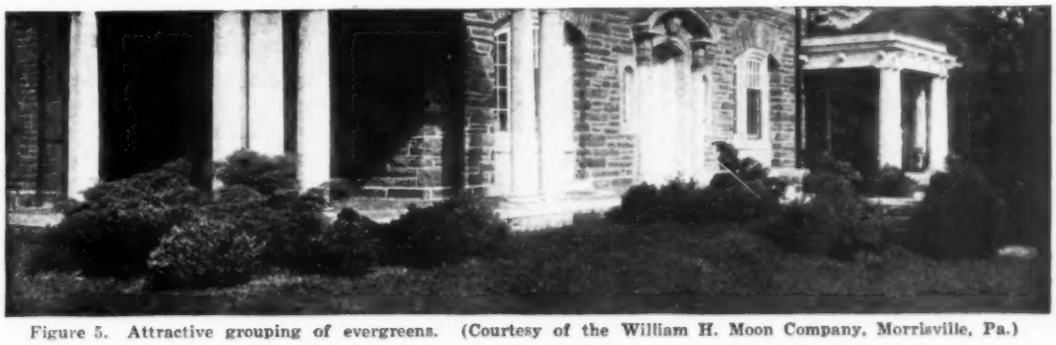


Figure 5. Attractive grouping of evergreens. (Courtesy of the William H. Moon Company, Morrisville, Pa.)

We plant around the base of a building to hide the splash line and to break the straight line where the structure blends with the soil. The height of the mass of green foliage, however, should depend somewhat on the size and height of the building. In no case should any great proportion of the mass be allowed to grow above the sills of the windows. A high line of green at the base of a building is not attractive, particularly if parts of the windows are obscured. It is permissible, however, to have a higher growth between windows and at the corners or adjoining the ends. (See figure 3.) The use of larger plants near the windows shown in the illustration would be unattractive and spoil the design very materially.

Sweeping Curves Effective

The depths of the evergreen planting should not be the same throughout the entire front of the building. A more pleasing effect is obtained by varying the width by sweeping curves, so that the edge of the bed is not parallel to the front of the building. The borders of all evergreen beds should be kept neatly trimmed at all times, as this adds greatly to the appearance of the setting. In figure 4 a better arrangement would have been to make this border not straight, but curved, broadening out at both ends, with the planting narrower in the middle. The treatment, however, is good, avoiding anything like a formal appearance, and the varieties selected are admirable. Rhododendrons need a certain amount of shade, and should not be used except under trees or on a northern exposure.

The great objection to many of the evergreens is their stiffness and the care required in placing them to overcome this. Certain varieties, however, are graceful in their contour and the inexperienced are perfectly safe in purchasing them, because in almost any grouping or arrangement they are sure to give pleasing results. In this group may be listed:

Japanese holly .....Ilex crenata
Fortune's holly .....Ilex crenata var. fortunei
Small leaved Jap. holly.....Ilex crenata var. microphylla
Japanese yew.....Taxus cuspidata (not upright)
Short-leaved Japanese yew....Taxus cuspidata brevifolia
Spreading English yew....Taxus baccata, var. repandens
American hemlock.....Tsuga canadensis
Thread-branched Jap. cypress.....Retinospora filifera
Flat junipers, such as the
Pfitzer juniper.....Juniperus pfitzeriana
Purple-spreading juniper.Juniperus communis, depressa
Tamarisk-leaved savis juniper.....
.....Juniperus tamariscifolia sabina
Dwarf pine.....Pinus montana mughus
Japan juniper.....Juniperus japonica

To this list may be added for shady places:

Rhododendrons
Drooping andromeda.....Leucothoe cataesbaei
Japanese spurge.....Pachysandra terminalis

Almost any sort of grouping of the above varieties, placing the taller ones closer to the building or nearest to the central entrance, will give a pleasing effect. For the sake of variety an evergreen shrub called euonymus japonicus may be planted with them advantageously; also abelia grandiflora, or the bush arbutus. This abelia has a small, white, arbutus-like flower; it blooms throughout the entire summer and fall and makes a pleasing contrast with the evergreens. It is inexpensive and grows well but slowly.

Handsome Arrangement for Front of Building

A very handsome arrangement for the front of a building is Japanese holly, close to the building; next to that smaller specimens of the small-leaved Japanese holly and a border of Japanese spurge (a low evergreen plant which grows about six to eight inches from the ground) or periwinkle. Clumps of this sort, interposed with groups of yew trees, cannot fail to give attractive results. Of all the evergreens, the yews are probably the most attractive and easy to place. They have a few very handsome scarlet berries, are slow growing, with beautiful foliage, and do not present a stiff or ungraceful appearance. (See figure 7.) American holly trees

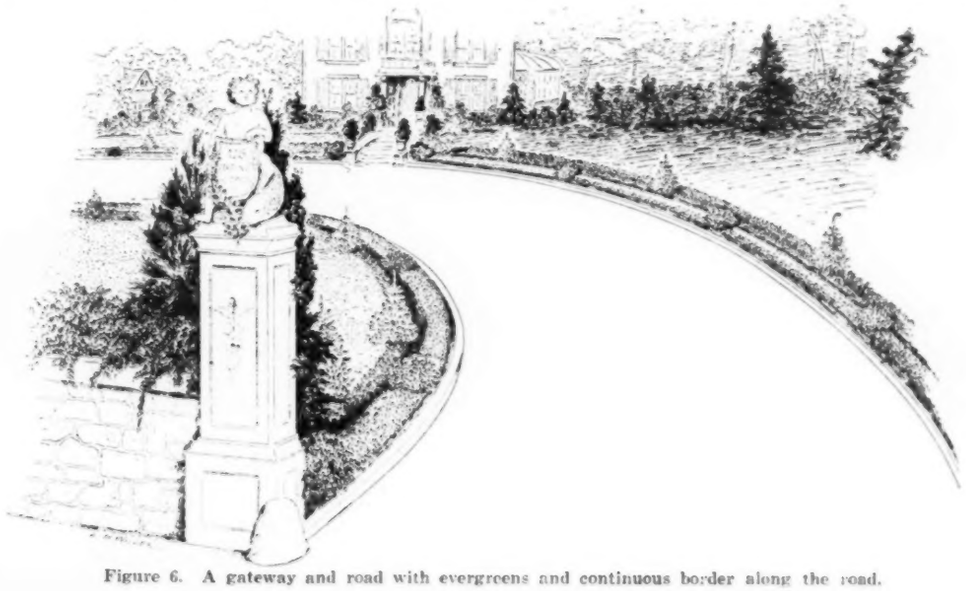


Figure 6. A gateway and road with evergreens and continuous border along the road.

also blend well with the Japanese holly bushes. A mass of rhododendrons with a border of Japanese spurge is extremely handsome, and can be used to advantage on the north sides of buildings where there is considerable moisture and shade. In such a place a few plants of drooping andromeda set in at the base of the rhododendrons will be most effective. Japanese holly also blends very well with the rhododendrons and the Japanese spurge.

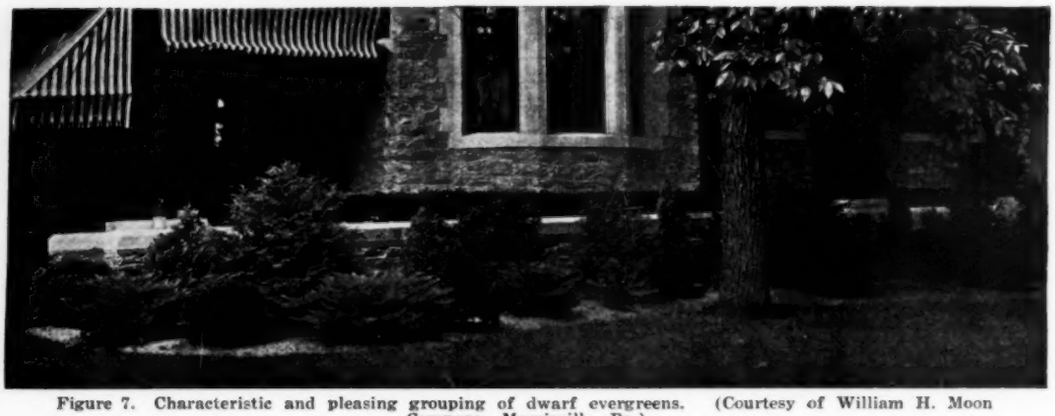


Figure 7. Characteristic and pleasing grouping of dwarf evergreens. (Courtesy of William H. Moon Company, Morrisville, Pa.)

Where to Plant Grass

There are certain places in the grounds of every hospital where a great deal of rubbish, such as waste paper, is being constantly deposited. These areas are usually in front of certain wards, where patients congregate before or after meals to talk and smoke. It would be a great mistake to plant groups of bushes in such localities, as the foreign material would lodge in the branches, be unsightly and could not be easily removed without damage to the plants. For such spaces grass is much to be preferred, as it can be readily policed up. If the area is extensive, one or two yews or Japanese holly bushes might be set out to break the monotony. They will catch only a part of the debris, and can be cleaned up by hand. Ivy may also be trained on the fronts of buildings of this type, as, owing to its position on the wall, very little of the waste paper, etc., will lodge therein.

Figure 8. Pfitzer juniper (Juniperus pfitzeriana).

Plant in Good Soil

It is common opinion that evergreens will grow almost anywhere and under all conditions. Unfortunately, this is not the case; most of them demand sunshine, and all require good soil and water. In setting out shrubbery of this sort, if the ground is poor, one should always secure some good top soil, make a sufficiently large hole, and place the plant in rich earth. In planting evergreens among deciduous trees most of them should be so placed in the open spaces as to obtain abundant sunshine. Some varieties require much shade, such as the rhododendron and drooping andromeda, and others will tolerate a certain amount, as for instance the hemlock and Japanese spurge. The spruces in general need plenty of sun.

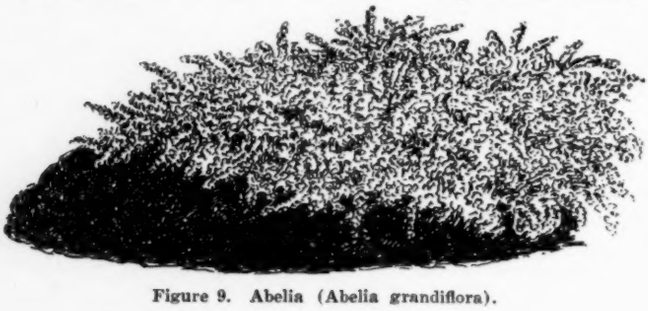


Figure 9. Abelia (Abelia grandiflora).

Distribution of Evergreens Throughout Grounds

On the lawns a judicious mingling of evergreens with deciduous trees will be found to be most advantageous, the evergreens giving a beautiful contrast with the lighter foliage and in winter, when covered with snow, becoming especially attractive.

Trees set out alone on the grounds are commonly known as specimen trees. When purchasing trees for this purpose pains should be taken to see that they are healthy, well developed and, especially, that they are symmetrical in form when viewed from all aspects. In selecting such trees in a nursery, be sure to walk completely around them as one side may look well and the other be more or less deformed.

For such specimen trees, Koster's blue spruce is extremely handsome, the body of the tree being dark blue-green, with the tips of the branches a silver gray, affording a wonderful contrast. The Koster's is rather expensive at the present time, but certainly a few can be afforded for placing in conspicuous locations. The Colorado blue spruce somewhat resembles the Koster and is decidedly cheaper. The Norway spruce is a handsome tree, very reasonable in price, and will probably be a stand-by where economy must be given due consideration. The various long-needled pines can be used to good advantage to give variety, the Scotch and Australian varieties being especially attractive. Occasional specimens of the gray cypress (retinospora squarrosa) and the green plumed cypress (retinospora plumosa) will be valuable additions, as both of these trees have beautiful, thick, lacy foliage and when properly trimmed will assume a

Figure 10. Dwarf pine (Pinus montana mughus).

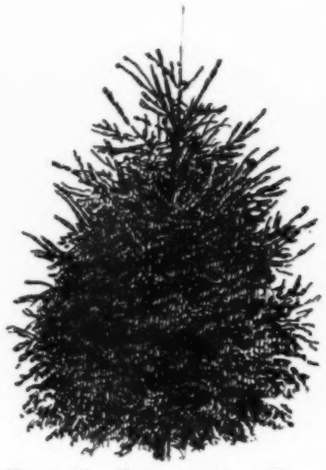


Figure 11. Norway spruce (Picea, excelsa).

graceful cone shape. The color contrasts pleasingly with other evergreens.

Specimen trees should be set out irregularly here and there where they will give the best effect. Other evergreens well adapted for single plantings are the various yews, American holly and the hemlock.

Special pains should be taken in setting out trees in the grounds to see that they are not placed in regular rows and at regular intervals, and where it is necessary to put them more or less in a row, as along a roadway, they should be slightly staggered and the line broken with an occasional clump. Utilizing different varieties in a formation of this sort will help to avoid a stiff and formal appearance.

The formation of low masses of green, by clumping or grouping dwarf varieties of evergreens at various strategic points on the grounds and along the walks, always gives a pleasing effect, and contrasts with other varieties of foliage. For this purpose the various yews are especially recommended, as well as Japanese holly, Fortune's holly, dwarf pine and the spreading low-growing varieties of juniper. In figures 5 and 7 are shown groups of such small evergreens. These are placed in the fronts of buildings but somewhat similar clumps can be effectively placed about the lawns.

The Japanese blood-red maple (acer palmatus, var. atropurpureum) has foliage of an extremely pleasing brownish-red color, which gives a wonderful effect, both with evergreens and deciduous trees. It is a tree of small habits and expensive, but a few specimens scattered throughout the grounds, or along the roadways, will amply repay the money expended, by the color tone which they add to the general effect.

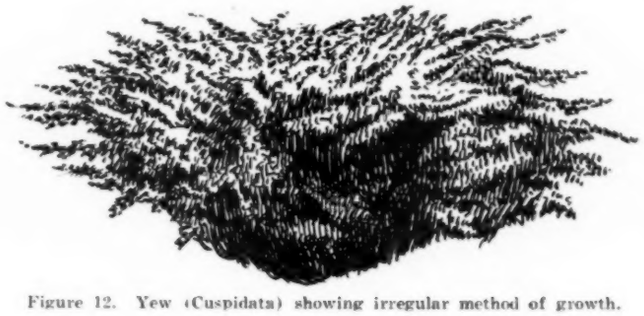


Figure 12. Yew (Cuspidata) showing irregular method of growth.

Lawns Preferable to Flower Beds

In the writer's experience unless the station is equipped with a greenhouse and a well-trained gardener, flowers are often a great disappointment. This is especially true where nurses, aids and other personnel attempt to raise flowers around their quarters. The plants are usually straggly, yield a few blossoms for a short time only, and the withered stems remain long afterwards, a disfigurement in every sense of the word. Nicely cut lawns are certainly to be recommended rather than poorly kept flower beds.

While it may be inadvisable to attempt to raise flowers, nevertheless, some flare of color among the green here and there is most welcome to the eye. This effect may be obtained in various ways by plants which have not the same drawbacks as flowers.

Azaleas are low-growing bushes with small leaves and are classed as evergreens. They are covered in the early spring with a mass of brilliant blooms, almost startling in appearance. They may be obtained in lilac, pink, red and white shades. After the blooms have fallen, the foliage is ornamental for the remainder of the year. They are most appropriate at the fronts of buildings or scattered throughout the grounds, being extremely effective. The only drawback is the price, which at the present time is rather high. However, if it is at all possible, a few pink or red azaleas should be included among the evergreens which are planted near the entrance to the main building, as naturally the most money should be spent on this locality.

Hydrangeas, while not evergreens, nevertheless remain in flower for a very long time and while in bloom are very colorful.

Rhododendrons may be secured in a variety ot shades and the flowers which appear in the early spring stand out against the dark green background.

The dogwood in red and white is very showy when in bloom, and there are other varieties of flowering shrubs which are a source of brightness.

Well trimmed hedges are still in favor and ornamental. Trimmed boxwood in other locations however, is very stiff and gives an extremely formal and undesirable effect. Still worse are grotesquely shaped box trees placed at regular intervals along walks or at the fronts of houses. Box, however, is very beautiful if allowed to grow in its natural way, untrimmed, and it increases in value every year.

The treatment of a roadway, of course, will depend on many features. It is well to plant the trees with a certain symmetry, but yet with no fixed design. If evergreens are chosen they should be of different varieties to avoid monotony by virtue of their different heights and colors. One should be particularly careful not to give the grounds the appearance of a cemetery, which will happen if stiff evergreens are used too freely. Among

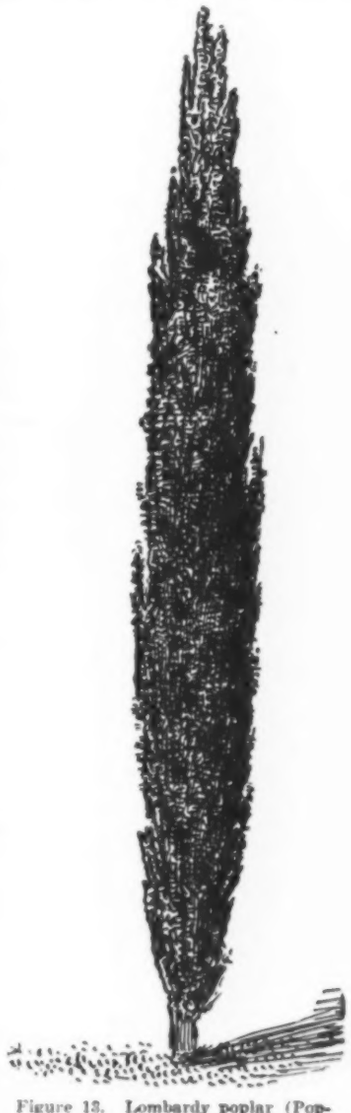


Figure 13. Lombardy poplar (Populus nigra Italixa.)

Fig. 14. Canadian hemlock. (Tsuga Canadensis).

the stiff varieties we might mention trimmed box trees, Chinese arbovitae, American arborvitae, Irish juniper, trimmed privets, Greek junipers, and red cedars.

A favored plan is to put a clump of evergreens at each side of the road at the main entrance, placing the taller varieties in the middle. If deciduous trees are already in this location, splendid effects may be secured by placing clumps of rhododendrons under these trees at the entrance. Clumps of the rhododendrons under the deciduous trees along the roadways are also very effective.

In figure 6 the border planted along the side of the roadway is a little too set and formal to meet with modern ideas, if it is carried out for any great length. The arrangement of the trees on the grounds, around the house, and at the gate posts is excellent, illustrating some of the points which have been already discussed. The border would probably be better if its formality were broken by the use of some irregularly shaped trees such as the American holly, large specimens of yew, or Japanese holly, instead of the Koster's spruce shown at regular intervals in the design.

Many institutions have somewhere about their fronts one or more flights of stone steps. These are usually unsightly but afford a splendid opportunity for landscape gardening. Very pleasing effects can be secured by setting out a variety of low-growing evergreens on the terraces alongside such steps. For this purpose, the low-growing junipers, such as the purple-spreading juniper, juniper tamariscifolia and the small specimens of the pfitzer juniper will be very useful. For contrast with these may be massed specimens of euonymus japonicus, dwarf pine and other low branching varieties of evergreens. The arbutus shrub (abelia) mingles well in these groupings if young specimens are selected.

The aim here should be to have a very low, flat, solid mat of evergreens, irregularly arranged so far as one side is concerned, but the same arrangement duplicated on the opposite side. The mat should not be of the same width along its entire length but varied, giving a curved border, symmetrical on each side.

Evergreens to Plant on Shady Banks

It is difficult to get shrubbery to grow on shady banks, and for this purpose are recommended rhododendron; American hemlock; drooping andromeda, an evergreen, spray-like plant; Japanese spurge, a very attractive low evergreen plant, and periwinkle. Honeysuckle is much used to cover banks and grows fairly well in shady places; of all the varieties, woodbine is probably the handsomest.

A very economical method of concealing an ugly building is to set out a row of Lombardy poplars at fairly close intervals, to form a screen which will obscure the building from the point on the grounds from which it is most noticeable. These trees are very cheap and are rapid growers. They might be replaced at a later date with some of the more handsome and expensive evergreens, skilfully blended, but for quick and economical effects, the Lombardy poplar cannot be surpassed.

The trees should not be planted strictly in straight lines, but staggered slightly and clumped at the ends or other places to avoid stiffness in design.

On large waste banks, on which grass cannot be grown or cut, the ordinary Japanese barbery (berberis thumbergii) gives quick and satisfactory results. It has abundant red berries and the foliage turns red in the fall; the plant grows well without attention and is cheap to install.

Where funds are very low Lombardy poplars can be used as you would set out evergreens alongside a building. Combined with hydrangeas (paniculata grandiflora) at their bases they give a pleasing effect. Hydrangeas are useful in general in front of buildings and around the grounds to give a color contrast with the evergreens.

Large specimens will give a satisfactory appearance immediately, and are extremely effective. However, using plants of this size is expensive as they are high-priced on account of the length of time which has been required to produce them. More economical effects can be obtained, if funds are low, by using several smaller shrubs; for example, three smaller specimens can often be secured at a total price of about one-third the cost of a large bush and will, when grouped together, cover as much area and produce almost as good an effect.

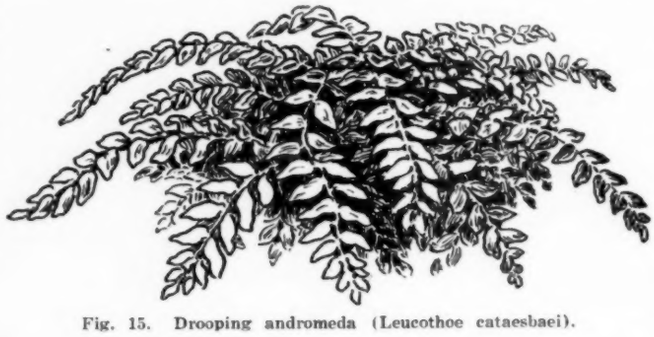


Fig. 15. Drooping andromeda (Leucothoe cataesbaei).

In estimating the number of plants required for the front of a building, consider that if you are specifying an evergreen of twenty-four inches spread there will be slight interlocking of its branches; in other words, a twenty-four inch plant will not cover twenty-four inches of wall space. It is always best to buy a few more than the measurements call for, because when the actual arrangement is made, it will usually be found that additional plants are needed to get the effect desired.

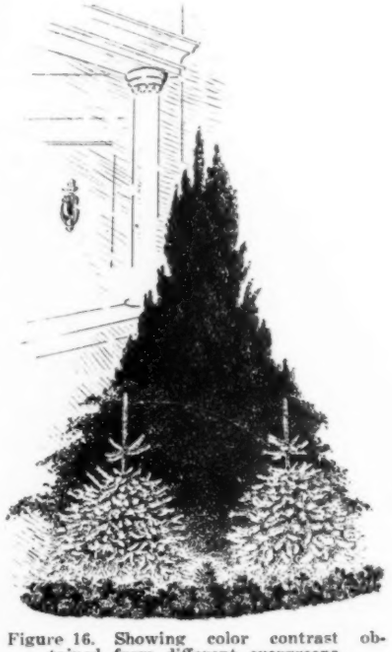


Figure 16. Showing color contrast obtained from different evergreens.

THE INFORMATION DESK

No satisfactory solution to a problem in your hospital is too trivial to pass on to other workers in the field. No question that perplexes you is too small to bring to the attention of those with greater experience in the field. This department is the readers' exchange, and its usefulness is dependent upon the measure in which its readers share their problems and their discoveries.

SPEED OF WASHING MACHINES

It has become a common practice among manufacturers of washing machines to insert lengthwise of the cylinder elevated pieces called ribs. Up to the present time, however, there has been no general standard for the height of these ribs in cylinders of given diameters, and therefore there has been considerable variation in different machines. The object of using the ribs is to provide a projection that will lift up the goods as the cylinder revolves, and drop the pieces back from a suitable elevation.

The cleansing of the goods comes from the circulation of the soap solution through the spaces in the fiber, and there is no dependence on friction, as is the case with an old-fashioned washboard. The drop of the goods into the washing solution forms what is known as the "squeeze," and this mechanical action is depended on to force in and out the fluid and cleanse the goods. In other words, each time the suds is forced out it brings along some of the dirt. The action is, of course, the same in the rinse, where the suds and any dirt it may carry in suspension are removed.

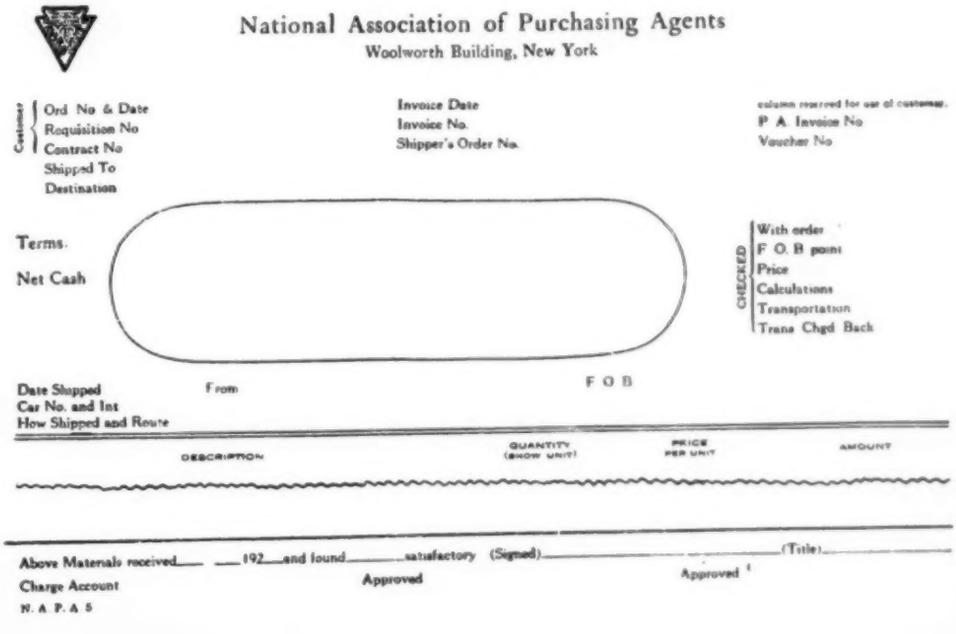
In a series of recent tests it was found that a fewer number of revolutions were necessary per minute with high ribs than were necessary with low. Putting this conversely, it was found that the lower the rib the higher the speed must be; and if there are no ribs the speed will be still higher. The tests were made with a machine that had a cylinder thirty-two inches in diameter. It had a glass end, and this made observation possible.

It was found that with six-inch ribs the best result was obtained at 24 r. p. m. With four-inch ribs the greatest efficiency was at 30 r. p. m.; with two-inch ribs it was at 38 r. p. m.; with no ribs it was at 45 r. p. m. That is, at the number of revolutions given for each case the load was lifted to the desired height, and these are the points of maximum efficiency. Further tests showed that this law applies to all diameters of cylinders, and it was found that a forty-two-inch cylinder with an eight-inch rib should have a speed of 21 r. p. m.

STANDARD INVOICE, PURCHASE ORDER AND INQUIRY FORMS ADOPTED

The standard invoice together with the purchase order and inquiry forms, shown here, were adopted by the National Conference held under the auspices of the Division of Simplified Practice, Department of Commerce, Washington, D. C., January 14, 1925. Forty-five organizations representing the producer, distributor and consumer as well as the wholesaler and retailer in the leading commercial fields, were represented at the conference, which was called at the request of the National Association of Purchasing Agents, of which Mr. W. L. Chandler is secretary.

The standard invoice form was developed through study of thousands of invoice forms used in many kinds of business. The form was initiated by the National Association of Purchasing Agents, and was developed through the cooperation of the Railway Accounting Officers Association, the National Association of Cost Accountants, and



National Association of Purchasing Agents
Woolworth Building, New York

Customer { Ord No & Date / Requisition No / Contract No / Shipped To / Destination

Invoice Date
Invoice No.
Shipper's Order No.

column reserved for use of customer.
P A. Invoice No
Voucher No

Terms
Net Cash

CHECKED: With order / F O B point / Price / Calculations / Transportation / Trans Chgd Back

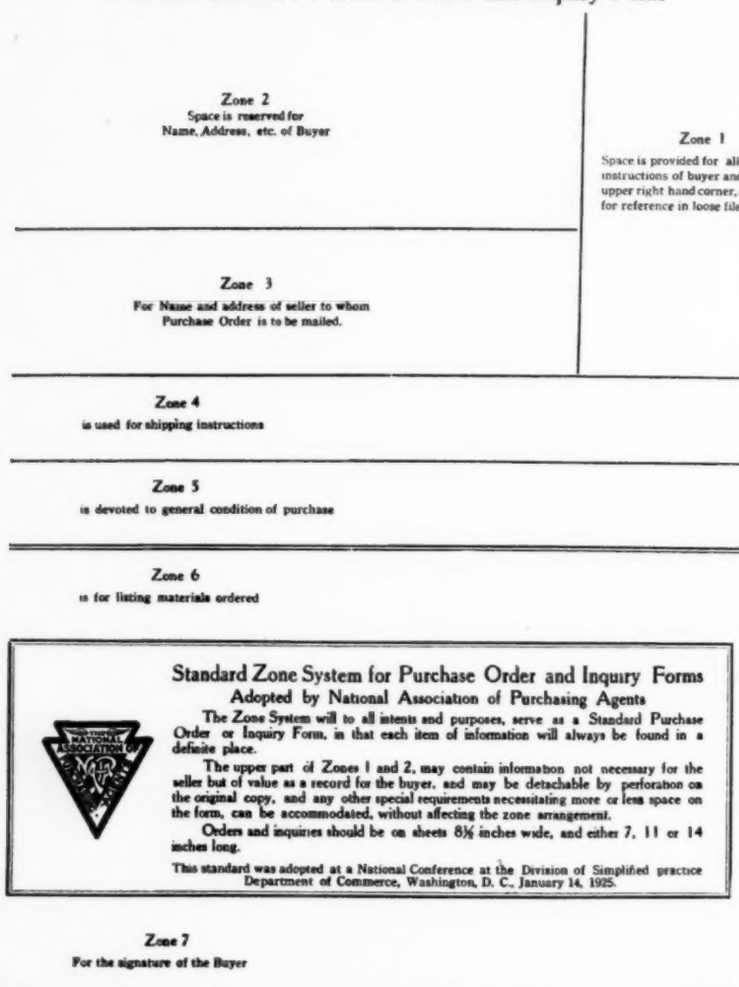
Date Shipped
Car No. and Int
How Shipped and Route
From
F O B

DESCRIPTION | QUANTITY (KNOW UNIT) | PRICE PER UNIT | AMOUNT

Above Materials received ____ 192__ and found ____ satisfactory (Signed) ____ (Title) ____
Charge Account
N. A. P. A. 5
Approved
Approved

Division VI—Purchase and Stores of the American Railway Association. These four leading groups adopted this form as their standard in 1921, and nearly thirty other national trade associations covering widely different fields are promoting its adoption and use among their members.

A canvass of all organizations and groups interested in these standard forms will be made by the Division of Simplified Practice to secure their approval and adoption. When a sufficient number of ratifications are secured, the forms are to be published as American Standards in the Elimination of Waste Series of the Department of Commerce. A survey of a large number of representative firms showed an estimated average saving of $620 a year, if all invoices received were standardized. This would amount to an aggregate annual saving of fifteen million dollars in all lines of American business, if this one form were adopted.


National Standard Purchase Order and Inquiry Form
Zone 2
Space is reserved for
Name, Address, etc. of Buyer
Zone 1
Space is provided for all necessary instructions of buyer and seller, in upper right hand corner, convenient for reference in loose file or binder.
Zone 3
For Name and address of seller to whom Purchase Order is to be mailed.
Zone 4
is used for shipping instructions
Zone 5
is devoted to general condition of purchase
Zone 6
is for listing materials ordered
Standard Zone System for Purchase Order and Inquiry Forms
Adopted by National Association of Purchasing Agents
The Zone System will to all intents and purposes, serve as a Standard Purchase Order or Inquiry Form, in that each item of information will always be found in a definite place.
The upper part of Zones 1 and 2, may contain information not necessary for the seller but of value as a record for the buyer, and may be detachable by perforation on the original copy, and any other special requirements necessitating more or less space on the form, can be accommodated, without affecting the zone arrangement.
Orders and inquiries should be on sheets 8½ inches wide, and either 7, 11 or 14 inches long.
This standard was adopted at a National Conference at the Division of Simplified practice Department of Commerce, Washington, D. C., January 14, 1925.
Zone 7
For the signature of the Buyer

VALUE OF MECHANICAL DISHWASHERS

That hand-washed dishes result in a higher liability to contagion than when machines are used, was the conclusion reached at a recent hospital convention. When a machine is used the temperature of the water at 160 degrees or over tends to decrease the bacterial count.

The recent investigation of the Minnesota Board of Health, on the cleaning of milk bottles at pasteurization plants showed a great variation in bacterial count under the following conditions: (1) use of steam oven; (2) use of steam spray through single perforated plate, steam inlet being operated by hand; (3) use of power driven washer with steam sprayed through a series of plates; (4) use of hand submerging in chlorine solution; (5) use of machine submerging in chlorine solution with hand operated apparatus; (6) use of power driven washer with chlorine solution added continuously to rinse by spray through two or more perforated plates. In these experiments (6) proved most satisfactory when properly operated.—*Trained Nurse and Hospital Review.*

ROPE IN BREAD

To inhibit the activity of the bacteria which causes rope you should use some substance that will carry an acid into the dough so that you will get sufficient acid concentration which will prevent this bacteria from becoming active. You may use buttermilk, a good form of condensed buttermilk, using about three pounds per 100 pounds of flour or a good strong nine or ten per cent acetic vinegar, using from one pint to nearly a quart per one hundred pounds of flour. This you must determine however, taking care not to use too much at the beginning. We would suggest that you make a few experimental doughs in which about three to three and a half pounds of flour are used. This quantity of flour will require approximately one quart of water. Begin using what would be equivalent to half a pint and run up to one quart of strong vinegar. You will notice that you will reach a point where the rope action will be inhibited. Use this quantity in your dough.

HOW TO KEEP PLASTERS

Medical plasters are sensitive to ill-treatment, but will retain their efficiency for years, if properly handled. The plasters should not come in contact with the air or sunlight. For that reason it is urged that they be kept in the original boxes, which are strong and tight, with the covers closed.

The plasters should be kept in a dry place. Never store them in the cellar or in any place where they are apt to gather moisture.—The *Red Cross Messenger.*

If we examine the impulses that carry us forward, none is so potent for progress as the yearning for individual self-expression, the desire for the creation of something. Perhaps the greatest human happiness flows from personal achievement. Here lies the great urge of the constructive instinct of mankind. But it can only thrive in a society where the individual has liberty and stimulation to achievement. Nor does the community progress except through its participation in these multitudes of achievements.—*Hoover.*

The State Department of Public Health of Illinois has adopted a set of rules and regulations governing the operation of tourists' camps in the state. The rules pertain to the choice of sites, the facilities for water supplies and waste disposal and the manner of inspection and supervision. The local health officer is charged with the responsibility of the enforcement of the rules.

NURSING AND THE HOSPITAL

Conducted by CAROLYN E. GRAY, R.N.,
71 Willow Street.,
Brooklyn, N. Y.

RECREATIONAL FACILITIES IN SCHOOLS OF NURSING: A STUDY BASED ON 71 QUESTIONNAIRES

THREE primary considerations in any school are provisions for the health, housing, and instruction of the student body. Far too little attention is paid to the health of student or graduate nurses, even where generous provision is made for their care when ill. The formation of proper health habits and the prevention of disease, even though taught in the classroom, are rarely a part of the daily life of the student, largely because the conditions under which student nurses live and work frequently put a premium upon the formation of poor health habits, rather than upon the cultivation of better ones.

Need for Study of Health Problem of Nurses

There is great need for a comprehensive study of the health of student nurses and the good and bad results of the three years spent in the hospital. Figures for schools of nursing are *not* available, but many colleges report that the general health of students who live in dormitories is better than that of students who live elsewhere. This of itself is a strong argument for the building of dormitories until every school has adequate provision for housing its students. The steady improvement in housing conditions and the large numbers of schools of nursing that are planning new dormitories indicate that those responsible are actuated by a desire to fulfill their obligations of providing adequate housing for their students.

Unlike dormitories for college students, those for student nurses should provide recreational activities, and often the laboratories, classrooms, and an auditorium for lectures and other large meetings are located in the residence building. This combining of teaching, recreational and residence facilities in one building, involves peculiar problems, the solution of which taxes the ingenuity of those who plan such buildings since, as is usually the case, it is necessary to secure the maximum value for the least possible expenditure of money.

Value of Recreational Facilities Disputed

Fascinating as would be a discussion of health problems, housing and the interrelation of the two, it is proposed to limit this article to a discussion of the recreational facilities which are, or should be, provided for student nurses. It is well known that there is a wide divergence of opinion regarding the value of certain things, such as gymnasiums, swimming pools, and other needed recreational facilities. In an effort to secure definite facts, a questionnaire was sent to 111 schools of nursing located in different parts of the country. Seventy-two replies have been received—a very large number considering "what a nuisance the growing number of questionnaires sent to principals of schools of nursing has become." I sympathize with the overworked woman who voiced the above sentiments, which I know are shared by many of her co-workers. Yet if decisions about questions in which we are all interested are not to be made in an arbitrary fashion, what better way is there of securing information from a representative group? It is typical of *nurses* that many not only answered the questions, but volunteered information, usually in defense or in explanation of existing conditions. The habit of putting one's best foot forward in defense of one's own school is deeply ingrained in most of us. The inference in the maxim "the best citizen is the one who desires to improve his own town, not he who believes it better than any other," is particularly apt, in that we have a goodly number who would qualify as "best citizens" according to this definition, for some of the most earnest seekers for information are in our own ranks.

Columbia Alumnae Campaign for Home

I am writing in a city where the alumnae of one of the outstanding schools of nursing has started a campaign to raise $1,000,000 for a nurses' residence. As their leader puts it, "the nurses are eager to have a part in building the medical center, partly because it is a great stride forward in modern medicine and public health, but chiefly because the services of the nurse should be represented in its building." If the nurses succeed in raising this amount, and I have every confidence that they will, it is only fair that their ideas should be embodied in the plans. Consequently they will be performing a double service, first in raising the money, second, in seeing to it that the residence, when completed, is a model of what a modern nurses' home should be.

In order to reduce as much as possible the mass of information received, the answers have been grouped according to the total number of nurses in each institution. For this purpose, graduate and student nurses have been counted together, because it seems reasonable to assume that recreational facilities should be for the use of graduates as well as students. I have little sympathy with those who reserve everything that is desirable for the students rather than the graduates. True, we are under peculiar obligation to give students adequate returns in education, but just because a nurse is a graduate and re-

(*Continued on page 367*)

The following abbreviations are used in this table: Add.—additional; appar.—apparatus; con.—continuous; dir.—director; essen.—essential; exten.—extensively; fic.—fiction; gen.—general; hosp.—hospital; inform.—information; install.—installation; instr.—instruction; lib.—library; moder.—moderately; num.—number; nurs.—nursing; rec.—recreation; recep.—reception; ref.—reference; rm.—room.

QUES. I.	GROUP 1 50 & under (4)	GROUP 2 50 to 100 (18)	GROUP 3 100 to 150 (23)	GROUP 4 150 to 200 (11)	GROUP 5 200 to 250 (6)	GROUP 6 250 to 300 (2)	GROUP 7 335	 375	 415	 596	No. Students not stated (4)
Record rooms.	All have rec. rms.	3—None. 1—None; will have upon completion of new home. 8—1 each. 3—2 each. 2—3 each. 1—4.	12—1 each. 5—2 each. 3—3 each. 2—4 each. 1—6.	8—1 each. 1—3. 2—5 each.	3—1 each. 1—2. 2—3 each.	1—1. 1—3.	Large rec. rm.; two roof sections; two small rec. rms.	Rec. room. (2 class rms.)	2 rec. rms. used for gen. recep.	Rec. rm. used for lectures.	All have rec. rms.
(a) Are any of these used as gen. recep. or class rms?	1—Used for recep. rm. 1—Used for class rm. 2—Not stated.	5—Used as class rm. and recep. rm. 2—Used for class rm. 5—Used for recep. rm. 5—Used for rec. rm. only. 1—Not stated.	6—Used as class rm. and gen. recep. rm. 3—Used as class rm. 6—Used as gen. recep. rm. 10—Rec. rm. only.	2—Used as gen. recep. rm. 1—Used as class rm. 2—Used as class rm. and gen. recep. 4—Rec. rm. only. 2—Not stated.	4—Used for gen. recep. and class rm. 2—Not stated.	1—Used as gen. recep. rm. 1—Rec. rm. only.	Rec. rm. only.	One rec. rm. only.			3—Used as gen. recep. rm. 1—Not stated.
(b) Are small recep. rms. provided? How many?	3—1 each. 1—None.	1—None; will have 6 in new building. 4—None. 5—1 each. 1—2 for graduates. 3—2 each. 1—3. 1—5. 2—Not stated.	5—1 each. 1—Num. not stated. 1—1 for graduates. 5—2 each. 5—3 each. 1—4. 1—6. 2—None. 2—Not stated.	1—1. 2—2 each. 1—3. 4—4 each. 1—5. 2—None.	4—2 each. 2—None.	1—6. 1—None.	Four small recep. rms.	Four small recep. rms.	Small sitting rm. on each bedrm. floor, not used for recep. rm.	Small recep. rms., num. not stated.	2—2 each. 1—3. 1—None.
QUES. II.											
Gymnasium	None.	9—None. 4—Use Y.W.C.A. 4—1. 1—Has bowling alley.	11—None. 1—Uses Chicago Field House. 11—1.	6—None. 1—Uses outside gym. 1—Will have this year. 1—Not at present; being used to house students while building. 2—1.	4—None. 1—1. 1—Uses class rm.	1—None. 1—1.	None at present, may have in new nurses' home.	None.	None.	None.	3—None. 1—Uses class rm.
(a) How large is it?		1—59x36 ft. 1—35x65 ft. 16—Not stated.	1—34x94 ft. 1—40x80 ft. 1—58x45 ft. 1—60x150 ft. 1—44x44x15 ft. 1—100x60 ft. 1—150x50 ft.	11—Not stated.	1—20x10 ft. 1—45x30 ft. exclusive of platform, 7 ft. 3 in. x 16 ft. 24 in.	1—38x88x18 ft. 1—None.					
(b) List prin. appar. provided.		1—Basket ball and volley ball. 1—Basket ball, piano, Victrola. 16—Not stated.	2—Incomplete; (new bldg). 1—Portable stage, basket ball, volley ball, Piano, Victrola. 1—Basket ball, dumbbells, roller skating, (not yet fully equipped). 1—Wands, bean bags, wooden pins, basket ball.	1—Incomplete. 10—Not stated.	1—Piano, basket ball, volley ball, net, Indian clubs. 1—Not yet installed. 4—Not stated.	1—None. 1—Basket ball, cage ball, volley ball, indoor baseball, handball & Indian clubs.					1—Mats only.

	GROUP 1 50 & under (4)	GROUP 2 50 to 100 (18)	GROUP 3 100 to 150 (23)	GROUP 4 150 to 200 (11)	GROUP 5 200 to 250 (6)	GROUP 6 250 to 300 (2)	GROUP 7 335	GROUP 7 375	GROUP 7 415	GROUP 7 596	No. of Students not stated.
			1—Trapeze, bars, dumbbells, Indian clubs. 1—Everything found in large gym. 1—Basket ball, volley ball.								
(c) How much is it used?		1—1½ hrs. wkly. by 18 students. 1—Two nights a week. 1—Once a wk. 1—Daily, ex. Sat. and Sun. 1—Daily. 13—Not stated.	1—Just started. 1—In new home, just opening. 1—2 hrs. a wk. 2—Daily. 1—Always open. 1—4 evenings a week.	1—Not regularly. 1—Every week.	1—5 mornings & 5 evenings. 1—Campus has been used for 60 hrs. 4—Not stated.	1—Daily.					1—Once a wk.
(d) Is reg. instr. in physical edu. provided?	1—Had instr. for 4 mos. students liked it?	2—Yes; one in connection with lessons in hygiene. 16—Not stated.	9—Yes. 2—Expect to have.	5—Yes. 1—No. 5—Not stated.	2—Yes. 1—For 5 year students at university. 1—No. 2—Not stated.	1—Yes.	1—No.	1—Not now given; had teacher from high school, but students did not care to take gym.	1—Yes.	1—Not stated.	2—Yes. 2—No.
(e) By whom is instr. given?	1—Volunteer.	1—Physical culture dir. 1—Had graduated in physical edu.; paid $1.50 per hr. 16—Not stated.	1—Social dir. 1—Supt. of nurses and lay instr. 1—Instr. at junior college. 4—Physical dir. 3—Special instr.	2—Physical instr. 1—Spcial instr. 1—Nurse instr. 7—Not stated.	3—Physical dir. 3—Not stated.	1—Instr. from Y.W.C.A.			1—Physical dir.		1—Member of staff. 1—Physical instr.
(f) How often given?	Not stated.	2—Once a wk. 16—Not stated.	8—Once or twice a wk. 1—3 times a wk. 1—1 hr. per wk (16 wks.) 1—1 hr. per wk. (12 wks. $1.50 per student.)	1—Every week. 1—Two periods weekly.	1—Twice a wk. 1—One hr. per nurse a wk. 1—4 hrs. a wk. 3—Not stated.	1—Once a wk.			1—3 times a wk. (given outdoors weather permitting; otherwise in lecture hall).		2—Once a wk.
(g) Are benefits derived worth cost of install. & upkeep?	Not stated.	1—Not tried long enough to say. 1—Had free use of gym. 16—Not stated.	6—Yes. 2—No. 1—Just started, unable to state yet.	2—Yes; no reason stated.	2—Yes. 4—Not stated.	1—Yes.			1—Not stated.		2—Not stated. 1—Yes. 1—Cost slight, as work is limited.
(h) Do you consider gym. essential? State reasons for answer?	2—Yes. 1—Necessary, but many available in city. 1—Not stated.	3—Essen. under competent supervision, physical exercise & recreation. 1—Not essen. if tennis and swimming available. 1—Ideal but not essential. 5—Not essen. but desirable; an asset. Diversion from routine outside interest; creates friendly feeling, good sportsm'nsh'p,	6—Not essen.; irregularly used; students lose interest; desirable but not essen. 1—Yes, more so than recep-rm. 11—Essen. Reasons: healthful, pleasant diversion; affords outlet for otherwise misdirected energy; physical benefits, because nurses are apt not	3—Not essen. but desirable, splendid equipment, physical development, change of exercise. 3—Essen. for physical development. 5—Not stated.	2—Essen. health improved by supervised exercise in special rm., properly heated & ventilated; with plenty of floor space, well equipped. If class rm. used do not get away from work atmosphere. 2—Desirable but not essen.	1—Essen. Proper supervision of exercise, free mingling of nurses, playing of games and competition help keep up morale of school.	1—Desirable but not essen.	1—Yes, but students do not think so.	1—Desirable but not essen.; time and fatigue elements to be considered.	1—Not stated.	1—Not essen. 2—Yes; needed for physical instr. 1—No experience in hospital having gym.

	GROUP 1 50 & under (4)	GROUP 2 50 to 100 (18)	GROUP 3 100 to 150 (23)	GROUP 4 150 to 200 (11)	GROUP 5 200 to 250 (6)	GROUP 6 250 to 300 (2)	GROUP 7 335	 375	 415	 596	No. of Students Not Stated
		strong body & mind; makes a more productive student. 1—Would like one but does not think it would be used unless an instr. were provided. 7—Not stated.	to take proper exercise. 2—Develops muscle, correct posture & breathing; aid to health; promotes interest in athletics; recreation; stimulates interest in wholesome health-habits; creates good fellowship.								
QUES. III.											
Swimming pool	1—1. 1—2 in city that students use. 2—None.	10—None. 2—Use pool at Y.W.C.A. 1—Use pool at Elks Club. 1—Uses pool at Children's Home (nearby). 4—Not stated.	1—Uses pool at boat club. 1—Beach connected with grounds. 1—Will have in new home. 1—Pool at junior college. 4—Pool at Y.W.C.A. 12—None. 3—Not stated.	6—None. 1—None but expects to have. 1—None. Lake 1 block from hospital. 2—Use outside pool.	2—Use pool in university. 3—None. 1—1.	1—None. 1—1.	None at present; hope to have in new home.	None.	1	None, will have Sept., 1925.	3—None. 1—Will have in new home.
(a) Dimensions?	4—Not stated.	18—Not stated.	1—22x48x11 ft. plunge, 18x42 x3½x7 ft. 1—36x15 ft.	1—75x25 ft. 10—Not stated.	2—Not stated.	1—36 ft. 10 in. x 14 ft. x 9 ft. 4 to 6 ft. deep.			Not stated.		1—60x20 ft.
(b) Method of keeping clean?	1—Weekly cleaning and change of water. 3—Not stated.	18—Not stated.	1—Flushed twice daily from Boston harbor. 1—Emptied, scrubbed and cleaned wkly.	1—Washed wkly, refilled twice a week, overflow daily.	1—Refilled wkly, treated at other times. 1—Not stated.	1—Thoroughly scrubbed and refilled once in 6 days.			Not stated.		1—Chlorinated filtration and overflow for surface dirt & water changed.
(c) Instr. in swimming given regularly?	1—Each summer. 3—Not stated.	2—Wkly instr. 1—No.	1—At junior college. 3—Y. W. C. A. weekly.	No.	1—Yes. 1—Not compulsory.	1—Yes.			Yes.		1—Not yet.
(d) To what extent is pool used?	1—Frequently. 1—Daily except during cold weather.	1—Occasionally. 1—To full extent of invitation. 16—Not stated.	1—25 per cent in hot weather. 1—Daily. 1—Every afternoon & evening.	1—Constantly.	1—During summer. 1—Once a wk. Compulsory for students for degree.	1—9 a. m. to 10 p. m.			1—3 evenings weekly.		
(e) How much of time during past year has it been closed?	1—Not at all.	1—Not at all. 17—Not stated.	1—Closed during winter (Bathing beach).	1—Four months.	1—During winter. 1—Cannot say. 1—During wks. when there is no school.	1—Six weeks during smallpox epidemic.			1—During vacation of physical dir.		
(f) Are benefits derived worth cost of install. & upkeep?	1—Yes.	1—Yes, for large school. 3—Benefits derived overbalance outlay. 1—Too expensive; cheaper to arrange outside.	1—Moot question. 2—No, too expensive. 3—Yes.	2—Yes.	2—Inestimable. 1—Yes.	1—Yes.			1—Yes; upkeep very little. Salary of physical dir. necessity in large school.		1—Yes.

	GROUP 1 50 & under (4)	GROUP 2 50 to 100 (18)	GROUP 3 100 to 150 (23)	GROUP 4 150 to 200 (11)	GROUP 5 200 to 250 (6)	GROUP 6 250 to 300 (2)	GROUP 7 335	GROUP 7 375	GROUP 7 415	GROUP 7 596	No. of Students not stated. (4)
(g) In planning new building for nurses would you consider swimming pool essential? State reasons.	2—Yes, good exercise. (a) keeps students out of public places, (b) keeps them out of mischief. 1—No. 1—Not stated.	3—Undesirable; cannot be kept sanitary; several known infections from pool supposedly well cared for. 4—Not essen., but desirable. 1—A great acquisition. 1—Delightful exercise & much pleasure. 1—Recreation; factor toward better personal hygiene. 1—If choice between pool & gym. would choose gym. 7—Not stated.	8—Essen. Reasons: Splendid exercise, diversion, interest of students; if not in school (inaccessible) do not go; keeps them from public baths; good physical exercise. 3—Undesirable, not sanitary. 2—Not essen., but desirable. 1—No experience; would like one installed.	5—Essen.; healthful recreation. 1—Had pool; now used for other purposes. 4—Not essen.; infectious; expensive.	1—Not enthusiastic because of infection. 1—Not as essen. as gym. with showers. 1—Not unless cost & upkeep are provided. 1—Essen., have one in new home. 1—Not essen., expense; time; effort.	1—Most essen., good exercise.	1—Not essen., but desirable.	1—Essen. for exercise and amusement.	1—Yes, nurses desire it; keeps them from public pools; makes for better morale in school.	1—Most essen.	1—Essen. for comfort & recreation. 1—Not essen., not sufficiently used. Arrangement made with Y.W.C.A. 2—Not essen. 1—Question of hygiene.
QUES IV											
Tennis courts (a) How many?	2—1 each. 1—Normal school court half a block away. 1—None.	4—None. 1—Planning one for coming summer. 1—Issues tickets for rented courts. 8—1 each. 3—2 each. 1—Not stated.	4—None. 13—1 each. 4—2 each. 1—Uses several courts in park. 1—Will have soon.	7—1 each. 1—Uses public court. 1—2 available. 2—2 each.	4—1 each. 1—2 1—4	1—1 1—3	2	2	1	1	3—1 each. 1—2
(b) To what extent are they used?	3—Not stated. 1—Small scale.	2—Exten. 4—Daily. 1—Almost contin., weather permitting. 1—Very little; students use park courts. 4—Very little. 6—Not stated.	14—Exten. 1—Moder. 1—Daily during spring & fall. 3—Little. 1—Rented and used but little.	1—Daily. 1—Moder. 1—Three days a week. 8—Exten.	1—Daily. 5—Exten.	1—Moder. 1—Daily.	Used exten.	Used exten.	Used exten.	Used but little.	2—Used much. 2—Used little.
QUES. V.											
Library — Fiction; Ref.	1—Ref. only. 3	2—None, will have later. 3—Ref. lib. only. 1—Fic. lib. only. 3—Fic. & ref. lib. 9—Lib., character not stated.	1—None. 4—Ref. & fic. lib. 1—Ref. lib. only. 1—Fic. lib. used by patients & nurses. 16—Lib., character not stated.	10—Ref. or fic. lib. 1—Ref. & fic. lib.	All have lib., one has use of medical lib., block from hospital.	Both have lib.	Has lib.	Branch of county lib. Have ref. lib.	Has separate fic. & ref. lib.	Has lib.	All have lib.
(a) What is total annual cost of upkeep?	1—$600 including salary of part-time librarian. 3—Not stated.	5—Not estimated. 3—About $30. 10—Not stated.	1—Just being installed. 6—Not estimated. 1—By donation. 1—$25. 2—$100-$120. 2—$200. 1—$1,320.	2—By donation 1—Raising funds through alumnae 1—$50. 1—$350 1—Not estimated. 1—$300 donation which purchased about 300 volumes.	1—By donation. 1—$25. 1—$125. 2—$250.	1—$100. 1—By donation.	$500 from special fund.	Not stated.	Provided in general budget; $250 for ref. books; $125 magazines.	Not stated.	1—$125. 3—Not stated.
(b) How many books?	1—{ 103—fic. 206—med. & nurs. 1— 75 nurs.	1— 85 ref. 1—100 ref. 1—114 ref. 2—120 ref.	3—Num. not stated. 2—50. 1—100.	1—Num. not stated. 1—150. 2—300.	1—22 new books 1—150. 1—304. { 922 fic.	1—4100. 1—400.	400.	Not stated.	Not stated.	Not stated.	1—{ 20,466 fic. { 350 ref.

	GROUP 1 50 & under (4)	GROUP 2 50 to 100 (18)	GROUP 3 100 to 150 (23)	GROUP 4 150 to 200 (11)	GROUP 5 200 to 250 (6)	GROUP 6 250 to 300 (2)	GROUP 7 335	 375	 415	 596	No. of Students not stated. (4)
	1—200 nurs. 1— 70 nurs.	1—160 ref. 1—150 fic. 1—200 fic. 1—300 fic. 2—Large number, character not stated. 2—300 to 350. 2—500. 1—450.	1—300 fic. 1—320 ref. 430 fic. 1—270 ref. 1—210. 4—500 to 540 1—350. 2—600. 1—800. 1—1000.	1—400. 1—407. 1—500.	1—400 ref. 1—1690.						1—1,400 fic. 600 ref. 1—About 300. 1—Not stated.
(c) How many magazines?	1—10 1— 6 1— 5 1— 4	1— 2 2— 5 6— 6 1— 9 2—13 1—20 Nurs. & Current.	1—1 Current. 2— 3 1— 4 1— 6 1— 7 2— 8 1— 9 4—10 1—11 1—12 1—15 1—18 current & nurs.	1— 3 Character not 1— 4. ter not 1— 5. stated. 1— 8. 1—10. 1—12. 1—17. 1—18.	1— 6. 1— 5. 1—10. 1—20. 1—27. 1—30.	1—10. 1—Num. not stated.	75—Character not given.	Not stated.	Num. & character not stated.	20.	1—20 current 6 nurs. 1—12 current 10 nurs. 1—7. 1—Not stated.
(d) How many newspapers?	3—1 daily. 1—2 daily.	1—Nurses take daily papers. 1—1 daily. 2—2 daily. 1—3 daily. 1—4 daily.	5—1 daily. 5—2 daily. 1—3 daily.	2—2 daily. 1—3 daily.	3—1 daily. 1—2 daily. 1—3 daily. 1—4 daily.	1—2 daily.	6—daily.	Not stated.	Students purchase daily papers.	3 daily.	1—1 daily. 3—Not stated.
QUES. VI. Add. inform. in answer to question "What recreational facilities should be provided for nurses employed in hospitals?"	1—Definite plans for complete ref. lib. & study. Give 5 min. exercises before morning chapel. 1—Social dance or party at least once a week. Cards, games, candy-pulls whenever desired. Player piano, Victrola and radio in recep. rm. 2—No suggestions.	2—Hikes, games outdoor sports. 1—At homes, teas, picnics. 2—Home talent plays encouraged. 1—Outdoor picnics financed by hospital; kitchen for "spreads," school supplying tea, coffee, bread and butter, etc. 1—Encourage club membership and contact with outside interests. 1—House mother plans amusements; dancing at any time. 1—Basket ball league organized between 4 hospitals in city. 1—Frequent dances, card parties. 1—Student nurses' glee club, friends invited. 1—Parties frequently. 1—All forms of rec. found in grade "A" college.	1—Physical training in school rather than Y. W. C. A. 1—Rec. dir. 1—Forms and fields of rec. depend on locality. 1—Students entertain once a month; dancing, card parties, suppers, motion pictures, musicales, home talent. 1—Folk and modern dancing; croquet. 1—Talks on art, books, dress, etc. Tea with music or other entertainment rainy Sundays. Stimulates hospitality. 1—Roof garden. 1—Outside interests rather than too much within school. 1—Auditorium with stage for plays, etc.; kitchen and small dining rm.; funds for glee club, drama, current events club, etc.	1—Athletic teams. 1—Lunches and spreads, kitchenette for each class; class parties every month; radio; ice-skating; provision of tickets for concerts, lectures, theatres, etc.	1—Bowling alley; student publications; fund for dance music or putting on a show.	1—Diet kitchen and equipped dining room where friends may be entertained. 1—Roof porch or lounge; may also be used for sleeping purposes.	Pleasure and recreation funds; maintenance of seven passenger car and chauffeur for use of students from spring to fall.	Theatricals, dancing, athletics.	Provision for outdoor rec. fund for current topics; convenient places for serving refreshments at parties, etc.	No suggestions.	1—Tennis court flooded in winter for skating.

ceives a salary is there no obligation to give her a square deal?

Rights of Graduate Nurse Overlooked

One hears so much about graduate nurses who cannot be counted upon for routine work, who are lacking in ethical ideals, who change their positions so frequently that the annual turnover in some of our hospitals is appalling. It is regrettable that so little is said in defense of these nurses, when so much may be said, particularly when one studies some of the disadvantages under which they work, and the restrictions placed upon them. I believe we have yet to face the problem of making institutional life and work attractive to graduate nurses, and I have faith that it can be done. Moreover, the cost of hiring and firing in hospitals is probably greater than in industry, though it may not be so easy to reckon it in dollars and cents.

A limited study of the answers reveals two glaring omissions in the questionnaire, namely, the total number of hours on duty per week, and the average age of the students. Answers to these questions would have been helpful in evaluating the information submitted. If students are required to work unreasonably long hours, or to the point of extreme fatigue, it is obvious that gymnasium facilities will not be used. Then, too, the extreme youthfulness of some groups of students increases our responsibility, for many young women enter schools of nursing while still in the adolescent period, and are put on "their honor," when ideals of honor are really in the making.

Often they live in scattered groups, under conditions that make supervision, mothering, or social guidance quite impossible. Where the results are unfortunate, one wonders whether the offending student, or the authorities responsible for the conditions under which they live, are more to blame? Even though the student is the one to pay the price, one cannot but question whether we are justified in assuming that young women who elect to study nursing need less guidance and chaperonage than their contemporaries who go to college.

Wide Divergence in Facilities in Large Schools

In "group 7" two of the largest schools are connected with city hospitals. In one case the picture presented by complete answers to the questionnaire is that of good provision for recreational facilities, annual outlay for books and magazines, and clean-cut ideas regarding the value of present facilities and the need of additional ones. In the second case, an even larger school returns a questionnaire almost blank, not I am sure from any lack of desire to cooperate, but because the facilities are not worth mentioning. Nearly six hundred nurses and no gymnasium, no swimming pool, one tennis court, apparently no fiction library and no provision for upkeep of same! What a contrast! The poor school is located in the larger city and is the one reputed to be the richer of the two. Interest in this contrast led me to further inquiry, and I find that in both cities the same political party is in power.

Can it be possible that Democrats in one city are so much wiser and more generous than their brothers of another city? I cannot believe this, for I find in the governor's message of the larger state, a whole section devoted to arguments in favor of reducing the hours of labor for women and minors in industrial establishments from fifty-four to forty-eight a week. It seems as if it might be possible for such a man to exert his influence in favor of reducing the hours for nurses in hospitals, at least as low as the working hours in industrial establishments. In industrial establishments the workers deal with *things;* in the hospitals the nurses deal with human beings, and if human life is the most precious thing in the world, as most of us believe it is, then it seems reasonable that those who are entrusted with its care ought to be kept above the point of fatigue which facilitates mistakes.

If recreation, means *re-creation,* then shorter hours and adequate recreational facilities are not too much to ask for nurses, whether students or graduates.

It is always a comfort to find other workers in the same field, even though widely separated geographically, reaching the same conclusions. The following letter which I publish, by permission, shows this to be true.

Letter Contains Plea for Recreation

"I feel that the replies which I have made to the questionnaire attached are of little use. Therefore, I am supplementing the questionnaire by a letter, as I have very decided opinions on the matter of recreation for student nurses. We have only gone half way when we provide facilities for the recreation of student nurses. The other half of the way is just as important; namely, providing opportunity to use the facilities furnished.

Suppose there is a good tennis court, and that students are off duty four hours. Perhaps there is a one-hour class and one meal out of this four hours; that leaves two and one-half hours. If in that two hours and one-half, these students get into tennis clothes and then back into uniform, they can play but a very short time. The entire four hours has been consumed without the slightest opportunity for rest. It is an exceptional student who can be on duty eight hours, and on her feet the other four hours, minus the time she sits down for one class and lunch. To be sure, she has an afternoon off duty, but she should get away from the hospital then.

"With the stress of hospital training, few young women are going to take exercise unless it is stimulated and directed. How many young women in college will take exercise or belong to any one of the student teams unless they are stimulated by a physical director? We prattle about an eight-hour day for student nurses. Outside of the preliminary course practically all our students work on the wards eight hours and in addition to that carry a class schedule which is heavy. I believe we might just as well save ourselves the trouble of providing tennis courts, swimming pools, facilities for basket ball, etc., until we can also provide a physical director and see to it that our student nurses are not too tired for exercise.

"The general recreation room should not be the general reception room. There should be a room where a small group of graduate nurses, seniors, or preliminary students, may "give a party." There should be two or three small reception rooms where a caller could wait and where a nurse can receive a caller in semi-privacy. Either in the classroom or in a lecture amphitheater, or in some such place there should be a platform and facilities for a curtain so that home talent shows may be given. There should be a real library, not only where students can study but where they can quietly read magazines and books.

"It is not an uncommon thing to have parents tell those of us who are superintendents of schools that they do not wish their daughters to come to train. The reason usually centers around the possibilities of extreme fatigue and the lack of recreation. It goes without saying that the hospital should be a teacher, not a pupil in matters of health and recreation. We have enriched our training by affiliations, by additional courses, and by providing better teachers. Before we go any further we need to provide facilities for recreation and opportunities for using these facilities.

I feel more strongly upon this subject than I can express. This thing comes very close to me personally. Here I am a mature woman with what the world would call success in my chosen profession, but my recreation has been nil. I cannot skate, swim, nor have I ever been able to play a decent game of tennis, golf or bridge. Outside of my profession, I am a mighty poor member of society. If I can do anything to save my successors from being in the position that I am in I intend to do it."

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU G. GRAVES,
798 Lexington Avenue, New York, N. Y.

THE HOSPITAL DIETARY DEPARTMENT: A FORECAST*

BY MALCOLM T. MACEACHERN, M.D., C.M., ASSOCIATE DIRECTOR, AMERICAN COLLEGE OF SURGEONS, DIRECTOR OF HOSPITAL ACTIVITIES, CHICAGO, ILL.

I AM justified in assuming that there is great interest in dietetic work, judging from the large attendance here today. This general interest is what we should expect when we realize for a moment the magnitude of the hospital field. There are 7,000 hospitals in the United States and Canada today and 12,000,000 or more patients pass through these institutions annually. Their primary and all-important function is to care for the sick. In short, your task is to administer the dietary requirements, administrative, teaching, scientific and other, to 12,000,000 patients in 7,000 hospitals annually. Is there any better reason for you as a group from all over the United States and Canada to be assembled here for intensive first hand study of some of the problems of general interest as they pertain to your great task?

Hospital's Influence on Dietary Service

The location and size of hospitals have an important bearing on dietetic work. The smaller the hospital and the more rural the location, the more likely to be without a well-developed efficient dietary department. It will be of interest to you to know that at the beginning of the year we had in the American College of Surgeons, 3,322 active general hospitals of twenty-five beds and over registered for survey in connection with hospital standardization, and of this number twenty-six per cent were 100 beds and over, twenty-seven per cent, fifty to 100 beds, and forty-seven per cent, twenty-five to fifty beds. Again, forty-nine per cent of these hospitals were found in communities of ten thousand or less. Therefore, let us not think of your problems as one belonging to the large hospital in the thickly populated center, but also as one pertaining to the smaller institution and the rural community. Here the real difficulties exist in securing a properly organized and efficient dietary service. The problem is an enormous one. Realizing how vital this work is to the patient, we are urging you to cover the field with your service just as rapidly as it can be done, in order that patients in every hospital may have this advantage.

What the Patient Expects of the Hospital

Hospitals today are expected to render the most efficient service to every patient treated. What then does the patient expect of the hospital? (1) An accurate, early diagnosis. Does the dietitian take part in this? Yes she does, for not infrequently, through dieting, is the physician able to discover some detour from the regular functioning of that patient's organs or some irregularity in the normal or abnormal status of the patient at that particular time. Not infrequently is the dietitian called in to assist the physician to detect, through dieting, some indications that will throw light on the diagnosis. (2) Efficient and scientific treatment. In treatment today the dietitian plays no small part, especially in view of the work that has recently been accomplished in diabetes and other diseases of metabolism—a branch of medicine which is as yet more or less in its infancy. (3) The speedy return to physical health. This is what the patient expects, and this is what we must adequately provide in hospitals today. In carrying out the above requirements the dietitian must play her own important rôle. Indeed, the dietitian and the dietary department in any hospital are both inseparably connected with the proper care of the patient.

Hospital Service Composite

How are we going to insure that the patient is receiving the proper kind of treatment? Hospital service is composite. It is made up of a number of units—the medical, nursing, laboratory, x-ray, engineering, orderly, cleaning, domestic, and many others. The dietary service is one of the units in this composite or aggregate service. Good service from these departments or units, individually and collectively, can only come through good organization.

The dietition has an important rôle in the hospital organization, as she is closely related to the three main phases of work, namely, medical, nursing and business. Primarily, hospital organizations fall into three main divisions, as stated above: viz. (1) The medical, or that supplied by the physician, surgeon, specialist or technicians of various kinds working under their direction. This we we designate as the clinical aspect. (2) The nursing phase, which is carried on by the nurses and allied groups. This includes all that pertains to the nursing care of the patient. (3) The business phase, as the dietary department in every hospital is a large factor in operating costs.

*Address presented before the seventh annual meeting of the American Dietetic Association, Swampscott, Mass., October 13, 1924.

We recognize that the dietitian has a good deal of influence over the regulation of this part of the budget. The dietitian is head of the dietary department and as such must be held responsible for everything pertaining to the food service for the entire institution.

In analyzing an organization of this kind we find the dietitian and the dietary department in close relation to each of the three phases:

(1). The dietitian is closely related to the medical aspect. As already stated, her services may be enlisted in the diagnosis and treatment of the patient. She has been drawn closer to and, let me say, *into* the field of scientific medicine. She has become an adjunct to the doctor in diagnosis and treatment of a special group of diseases. She now has closer contact with the clinician and the laboratory worker through the more extensive work being carried on in blood chemistry and metabolism. She comes in contact with the physician in the observation, diagnosis and treatment of his patient. However, her relations and interests are not limited to such special groups. She is held responsible for a well-balanced special or general dietary to all the clients of the hospital as well. This contact with the professional side of the institution has been more marked during the past few years owing to the widespread interest in diabetes and other diseases of metabolism.

(2). The dietitian must have close relation and contact with the nursing phase through her responsibility in the teaching of student nurses, in addition to that of giving them a well-balanced diet. Today the nurses' curriculum demands that a high standard of dietetics be taught. Many states have a very strict requirement in this respect. Hence the subject of dietetics must be well taught to student nurses.

(3). We cannot overlook the dietitian's relation to the business side of the hospital. We fully realize that she has a great responsibility in this connection; she has or should have a great deal of power and influence in controlling the food budget of the hospital. This is one department that can spend a vast amount of money, and, indeed, requires to spend a great deal, and can waste much, if not carefully supervised and watched. This responsibility rests, primarily, with the dietitian, and here she is thrown into closer relation with the business or financial aspect of the institution. She must regulate the food budget so as to effect every possible economy and still maintain a high standard of efficiency.

Statistics show that it costs approximately $3,000,000 a day, or $1,000,000,000 a year, to operate the hospitals of the United States and Canada. Since a large proportion of this sum is required for the food budget, is it not reasonable to expect that every dietary department should be well organized and under competent control and direction?

From a study of hospital organization and its functioning it will be readily seen that the dietitian must assume numerous responsibilities and important relations in her work. Her contact through the institution is so extensive that it is difficult to assign the dietary department solely to one or other of the three phases of organization which I have mentioned, but it becomes part of each, as follows:

(1). The medical department through the scientific dieting general and special, that must be accomplished.

(2). The nursing phase through teaching.

(3). The business phase from the standpoint of the food budget.

Here, therefore, are the dietitian's triple relations, weaving her closely into the meshwork of the entire organization.

Chief Dietitian Should Have Suitable Title

I believe the time has come when we should agree on a dignified name for the chief dietitian of the hospital. I notice a tendency in some places toward adopting the terminology of director of dietetics. I like this term, as it implies supervision, direction and development. Some are indeed loath to stir from our old-time terminologies and do not believe there is much in the name used. I do not agree with them in this respect. Experience has shown me that the title has a constant influence on the conduct of the position. The title should carry with it a stimulating influence to initiate, develop, advance, rather than to stand still in a circumspect manner.

Essentials for an Efficient Dietary

There are very definite requirements for the successful development and operation of a dietary department. We expect such a department to render an efficient service. A good dietary service presupposes the following characteristics:

A Well-Organized Department

A well-organized department under the direction of a competent director. Great care is necessary to be exercised in selecting the director of such a department. This person requires special qualifications making her peculiarly fitted for the work. It is natural that we should expect her to have a liberal background of education, to be a graduate of a recognized school of dietetics, with special preparation and experience in hospital dietetics along administrative and executive lines. It is essential, as in the case of other departmental heads in a hospital, that the incumbent of this position have a pleasing personality together with numerous other qualities which make her readily adaptable to the innumerable and variable demands that will constantly be made on her. In addition to this, and of prime importance, are diplomacy, tactfulness and cooperation. She should know what good service is and be capable of properly choosing and handling personnel. The very nature of her work requires that she be thoroughly imbued with the idea of service, and finally, she must have ability for leadership which will be reflected in the efficient direction of her department. She must have an anticipating mind—one that has vision and thinks ahead or beyond present-day conditions.

I believe that it is preferable, when practical, to have a personal application from the candidate. Her contact when making application should not be limited to the superintendent or one person in the organization. In the selection of such a director I would recommend the following: (a) That the candidate make a written and personal application; (b) that she be interviewed not only by the superintendent or executive officer in charge, but by other officers of the institution, and particularly, one or two of the clinicians such as, the internist, the surgeon, the specialist and the clinical pathologist. I mention this particularly inasmuch as the incumbent of such a position has many extensive relations of importance. Therefore, it is always best to take considerable pains when making such a selection. Not every dietitian can be head of a dietary department in a hospital. Not every person can qualify from the standpoint of leadership, initiative and the many personal qualities required for success. The hospital dietetic field today needs leadership, for there is a great deal of work still to be accomplished.

I would vest the dietitian with full authority and re-

sponsibility for the entire hospital food service, including purchasing from the standpoint of quantity and quality, receiving, storing, preparation, distribution and service. This is a large order but successful hospital administration has as its fundamental principle unit responsibility. My policy has always been to select, with much care, heads of departments who are capable of carrying responsibility and exercising authority in a sensible manner. When this is not obtainable it is advisable to change the incumbent of the position. Departmental interference from outside is detrimental to smooth working, sincere effort, and success. The wise superintendent or general supervisor should not interfere with the details of any department, but select a head for the same who will carry responsibility and authority as indicated above.

Duties of Director Three-fold

Since the duties of the director of dietetics are threefold: (a) administrative; (b) teaching; (c) scientific: to carry on these functions and properly discharge such responsibility it is necessary that she surround herself with a staff of competent assistants as required by the size of the institution. The staff must be carefully selected, well adapted to their respective duties and imbued with the ideals of a good service—loyalty, industry, economy, efficiency, honesty, with a personal interest and desire to please their clients.

In selecting personnel bear in mind that it is always advisable to have them medically examined before they are engaged. Many hotels and cafeterias today require a physical examination of their employees before they are accepted, and at regular periods afterwards. It is equally true that many hospitals very commonly neglect this matter. I was recently informed of a most excellent, faithful employee, who after serving for four years in the diet kitchen of a hospital was found to be suffering from an open case of venereal disease, which might easily have contaminated much of the food. I dare say that such a condition as this exists occasionally unless precautions are taken to avoid the same. I would therefore recommend a physical examination of all the staff when engaged, and a periodic examination afterwards.

The morale in any staff presupposes good living and working conditions. Many institutions today give their help board and lodging within. When space and accommodations are available this is satisfactory. Usually, however, we find the staff obliged to sleep in basement rooms, dark, dreary and uncomfortable, with little or no attention given to the social aspect by the hospital management. Living conditions of this kind do not always promote the desirable kind of esprit de corps in the group. In many places it has been found that a better morale can be established by allowing employees of this kind to live outside the hospital. In case of married men and women who have their little home and garden within reach of the hospital this system means much to them and will permit of their keeping their home going in a very good manner while their work continues. Working conditions are improving. Better working accommodations, better salaries and better working hours are needed. Attention to these two conditions will undoubtedly improve the working morale of the group.

A Properly Planned and Equipped Department

In planning and equipping the dietary department the hospital should take the dietitian into consultation for advice on location, space, layout and necessary equipment; all of these based on giving the most efficient service at the least cost. Many institutions erected in the past, and even today, have noticeably failed in giving attention to the layout required for such a department. When erecting hospitals, boards of trustees would do well to call into consultation more frequently the heads of departments who are obliged to carry on in the institution when it is completed. There is no doubt but that the dietitian could give a great deal of advice in the matter of location, layout, type and arrangement of equipment. The question of whether or not the dietary department should be on the ground floor or unfortunately, in the basement—as we so often find it, or whether it should be on the top floor, is one which I am not prepared to debate at this time. However, I have found many institutions where the department is on the top floor and this arrangement has proved satisfactory from the standpoint of odors, noise and comfort for their employees. I believe the question of location of the dietary department should receive more consideration from you as a group. It is indeed difficult for any architect to lay out a hospital with all the technical departments unless he can consult with those concerned.

Likewise, in the equipment of the dietary department the director of dietetics must be brought into consultation. With the great amount of labor-saving equipment on the market today great economy in administration can be effected by its use insofar as possible. Here, again, an organization such as yours should be advisory to hospitals on the matter of equipment.

Food Service

We have heard a great deal lately regarding central food service in hospitals. The advantages and disadvantages of the direct and indirect food services I am not prepared to discuss, but theoretically the direct method by which the food goes directly from the dietary department to the patient should be the most economical and satisfactory. The indirect method necessitates the handling of food containers, loading them on a truck, pushing the truck into the elevator, taking it along the various corridors, banging and bumping the plaster and the doors, with accompanying noise and greater breakage, and finally delivering the food to the subsidiary kitchen for serving to patients. As this is a long, tedious process, it seems only natural that we should endeavor to develop a more direct service from the dietary department to the patient. It must also be remembered that with the indirect method the food frequently gets cold. When food is reheated we all know it is not so palatable, and thus results in complaints from patients. Food complaints in hospitals are always difficult to investigate and very readily antagonize the patient. I believe the fewer people we have to handle the food between the time it is prepared in the kitchen and served to the patient the less confusion, labor, noise and mistakes there will be. I believe the direct method prevents a great deal of discomfort to the nursing staff and reduces the work in regard to the food in various ways. Frequently we find nurses overheated in the subsidiary kitchen, and suffering many interruptions from the doctors or visitors.

With the direct service we give the director of dietetics more control over the food service. The hospital management holds her responsible for the preparation, distribution and general supervision of the food to the patient. In serving food to the patients I believe the time has come when we must develop a more selective service for our patients, allowing them a menu, if possible. Today almost universally patients are served with a tray of food without soliciting their desires, and too often we have on that tray something that arouses the patient's distaste for the

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whole meal. This means it must later be thrown into the garbage tin. The introduction of the selective service into a hospital will effect a greater saving and give more satisfaction. It will immeasurably reduce the garbage from the wards and kitchen. An instance is recorded where a hospital which formerly sold its garbage at $200 a month was obliged to reduce that price to $50 after introducing the selective food service for patients. This resulted in an enormous reduction in the bulk of food wasted and thrown away.

Purchasing, Storage, Preparation and Distribution

In the large hospitals the purchasing of food is done by the purchasing agent or steward. In the smaller institutions the superintendent will do this himself or herself. In every instance, regardless of who does the actual buying, I think the director of dietetics should determine the quantities and qualities of food required. The steward, even though very efficient and competent, should always consult with the director of dietetics as to the quality and specifications of food to be purchased. In some cases we have stewards who are not efficient and competent. The quality of the food should be acceptable to the director of dietetics. She has to take this raw material and turn it into palatable form so that the patient and staff get the benefit therefrom. Is it not reasonable that she should be consulted as to the quality of the food purchased?

In many institutions food storage needs greater attention. Poorly arranged, inconvenient accommodations and inefficient refrigeration means wastage at every turn. For the proper storage of food there must be: (1) Sufficient space in the storeroom to lay out the various articles in a systematic manner. (2) A good method of receiving and checking out of supplies. (3) A thorough accounting of the stock on hand. (4) A definite specification for purchasable foods. (5) Sufficient space for buying in large quantities in order to take advantage of prices. (6) A sufficient number and size of refrigerators to take care of the various perishable commodities. This means at least two or three refrigeration chambers as a minimum.

I believe that the preparation of the food should be entirely under the supervision of the director of dietetics, who has the necessary number of assistants, cooks and other types of employees. If the direct food service is maintained the distribution of the food might be by dumbwaiter or food truck. In either case the minimizing of time must not be overlooked. It is advisable to have vehicles for transportation of food insulated so as to keep the food warm. The serving of cold food to a patient is a justifiable reason for complaint. All hospitals should take precaution against this evil.

Prevention of Waste

Everywhere we are emphasizing economy in hospital work. No other department can be responsible for more waste than that of the kitchen, unless due control is exercised. What are the underlying principles, therefore, to prevent waste? To enumerate them serially they are:

(a) The purchasing of good quality of food at the best price. This may be done by tender, by large amounts or by buying at a particular time when prices are good or on the open market.

(b) Proper, adequate storage and refrigeration to prevent waste and to permit of buying in large amounts.

(c) Competent and efficient kitchen arrangements with good equipment placed so as to minimize effort and energy, and a well-trained and experienced personnel which can turn out work of good amount and quality.

(d) Food service which is pleasing and attractive to the patient. In this respect the meals must be hot and daintily served. It is indeed advisable, if possible, to have a more or less selective service in the hospital. To this end the daily menu, previously mentioned, is our best solution. One article of undesirable food served to a patient may arouse disgust for all the other food served. Small helpings repeated are better than giving too much at one time, and will have a great effect in reducing the volume in the garbage can.

(e) Daily supervision of garbage cans by a responsible officer of the hospital, before disposing of same, is exceedingly important. A check-up of this item must be carried out consistently.

(f) Reclamation of all uncontaminated waste or remnants is essential; for instance, the rendering of fat from meats, the final content being used for cooking or for sale, and that which cannot be so reformed, for making laundry soap. The keeping of outer vegetable leaves, bones, etc., makes a substantial basis for the stock soup kettle. The use of all toast and bread crusts not contaminated, for crumbling, dressing or puddings is an economy worth recognizing. Contaminated bread can be sold for chicken feed. Making jelly out of apple peelings and candied orange peel out of orange rinds which are not contaminated, a process which is being carried on in the diet kitchens today, adds a very splendid objective lesson to those in training for conservation and reclamation.

(g) The last, but not least, principle laid down is service, the fundamental requirement for success. The public today demands service, and the diet kitchen must always keep this in mind, for it has a large clientele to serve and satisfy, including the entire staff and roll of patients. Poor food makes for dissatisfied workers and patients and it reacts in many ways, resulting eventually in loss of interest in work by the employee, the hospital's disfavor with the patient who disseminates bad publicity when discharged from the institution. Every detail of the entire system or organization in the dietary department must, of necessity, be characterized by the highest degree of service.

Evolution of Dietetics

The history of dietetics shows a distinct evolution. It is not many years since hospitals did not have dietitians. This work was carried on by a faithful old cook, usually a woman who had a reputation in the community for such work. Later on the matron or housekeeper in larger hospitals assumed more or less control of the food problem and finally, in more recent years, the trained dietitian has taken over this responsibility with her three-fold functions as already mentioned. Thus hospital dietetics has been put on a much improved basis during the last few years.

It is only in the very recent years that dietotherapy has become a substantial part of the dietitian's work, and the medical group of the hospital is now looking to her for cooperation in this work, particularly in such cases as diabetes and other diseases of metabolism. Dietotherapy is a branch of work recognized and required in all hospitals today. It is true that different therapies are becoming more common every day. We have had drug therapy for years. We have also had physiotherapy with its various branches. More recently we have had occupational therapy, and now indeed we hear of book and music therapies. These are all necessary and valuable adjuncts in the practice of medicine. Dietotherapy comes into play in a very substantial way in medicine today. It has brought the dietitian closer to the physician, sur-

Adv. page 46

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geon, specialist and laboratory worker. It has brought her more into the field of scientific medicine. She must cooperate with the doctor in the treatment of many types of cases.

In her teaching function she must always remember that the student nurse is also a student of dietotherapy. When teaching dietotherapy to her student nurses she should permit them to take the special trays they have prepared for the patient in order to better correlate the clinical picture of that patient with the reason for that particular tray or special diet. Frequently, it is true, we see a nurse prepare a special diet in the dietary department and someone else present it to the patient. It is true that in nursing we have in the past taught a good deal in the classroom on the manikin and other apparatus, but the trend now is to connect up the lecture on pneumonia with a case of pneumonia, or that of a case of typhoid with the patient suffering from typhoid. Teaching is becoming more clinical in nature.

Follow-Up of Cases Important

Dietotherapy will fail unless hospitals develop a proper follow-up of cases treated in the wards and discharged from hospitals. I can remember cases of diabetes treated in the hospital wards which did very well. The sugar cleared up, they were discharged and sent home with instructions. Not infrequently have these patients returned later in the same condition as formerly. Indeed, metabolic cases are apt to go on in a cycle in this respect unless a proper follow-up can be instituted. Some hospitals have arranged a special diet room where patients can come and have their lunch and all their meals, if desired, and still continue with their work down town. This arrangement has proved fairly satisfactory but does not replace follow-up work carried directly into the home, club or hotel where the patient eats. A dietitian in any community assigned for follow-up work on all types of cases of this kind will do much to stabilize hospital results. Therefore, let me urge on you to stimulate the development of follow-up work for dietotherapy patients. Dietotherapy, now receiving so much interest, is becoming a more and more important problem daily and no doubt the future holds interesting developments for this particular phase. That is one of the reasons why we need women well-trained in dietetics.

Present Needs of the Hospital Field

As already stated, you have a large field to cover. Future development warrants your earnest attention and constant group meetings, such as you are having at this time. One of the problems you must face at once is dietetics in relation to the smaller hospitals. What are we going to do about dietitians for the large number of smaller hospitals all through this country? We know that they need a service of this kind. We have during 1924 in the organization which I represent, examined approximately 1,500 institutions under one hundred beds, many of them without an organized dietary department or a dietitian. They all have a distinct dietotherapy need. They all need well balanced diets for the whole group in the institution. How, therefore, are we going to solve this problem without the trained personnel who understand how to go about it? Probably it might be managed by grouping the institutions, especially where transportation service can be readily afforded. A number of hospitals are endeavoring to secure the services of traveling instructors in order to give student nurses the necessary instruction. To a certain degree this is meeting the needs of the training school but it does not always cope with the needs of the patients in the institutions. This problem warrants much interest and thought.

A great need of the field today is that of more trained dietitians—dietitians trained in hospital work. It is a fact that the larger institutions all over the United States and Canada are not all opening their doors to graduate dietitians who are anxious to secure post-graduate work in hospital dietetics. If the large hospitals would cooperate more in the work of training hospital dietitians it would be easier to fill the present need, and the number of trained hospital dietitians would eventually be materially increased.

Plea for Practical Standards

You are a group interested in the dietetic problems of this great country. You are an expert group to whom we look for standards in dietetics—standards in planning, in equipment, in personnel, in service, in teaching and administration. Do not develop standards which are impractical and difficult to carry out. Start with the lowest or minimum, the least which any hospital should have. Help these hospitals to start minimum standards, and if they are practical, adaptable and not compulsory you will find that they will go on increasing, from year to year, till the maximum standard is reached. When we have requests for information on dietetics in our hospital information and service department, I would like to turn to your association as an authority on this work. We are all looking to you to develop proper standards in the different phases of your work, as indicated. The American College of Surgeons has been carrying on the hospital standardization movement for a number of years. So far only minimum standards have been presented and these have been acceptable all over because they were voluntary, practical, adaptable and adjustable, and finally, they aim always at service to the patient. Therefore, build up your standards based on service to the patient, and let us all help you to introduce them and develop them in the various institutions. We must look to you for these standards as our authority. In my work of standardization of hospitals I know that if you endeavor to improve the service by these standards we will find our hospital standardization movement more effective.

Your efforts here and at home in your various departments will be a success only insofar as we can gauge the results obtained through your service as reflected in the good care of the patient. Just so far as the service you render betters and benefits the patient, just to that extent is your service good.

On behalf of the organization which I now represent, the American College of Surgeons, and on behalf of the American Hospital Association which I represented up to a few days ago, I wish you every success in your work and hope that you will continue to grow and develop along right lines. I hope you will feel that you are now a well recognized group in every hospital where you are organized. I hope you will also realize that you are each carrying the triple functions mentioned above—the greater part of the task lies before you, but let me assure you that we are ready to cooperate with you so long as you keep yourselves practical in promoting the best service to the patient in your hospital.

PHILADELPHIA DIETITIANS HOLD BANQUET

The Philadelphia Dietitians' Association held its February meeting in the form of a banquet at the new Benjamin Franklin Hotel. With forty-one members present,

(*Continued on page 378.*)

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and by ALEC N. THOMSON, M.D., Medical Secretary, Committee on Dispensary Development, United Hospital Fund of New York, 15 W. 43rd Street, New York

TEAM WORK FOR TONSILS

BY GERTRUDE HOWE BRITTON, SUPERINTENDENT AND DIRECTOR OF SOCIAL SERVICE, CENTRAL FREE DISPENSARY, RUSH MEDICAL COLLEGE, CHICAGO, ILL.

THE importance of cooperation among social agencies is strongly emphasized in the present prescribed training of prospective social workers. Cooperation, as they are made to understand it, means in this day of multiplicity of welfare agencies in large cities much more than merely helping—it means the avoidance of duplication.

In the everyday work of any large welfare organization, there are many opportunities not only to assist and harmonize the efforts of the various associations, but to cooperate by interchange of personnel, work and records. There are also frequent occasions to avoid duplication of effort. This results in better work and in service given with less effort, less expense, and, most of all, with less annoyance to the unfortunate applicants for assistance.

How Chicago Agency and Dispensary Cooperate

The benefits of such coordination, cooperation, and avoidance of duplication are strikingly shown in the results of an arrangement which has been in operation for over three years between Central Free Dispensary and the Visiting Nurse Association of Chicago.

The Central Free Dispensary has a large and well-manned nose, throat, and ear department, and by close cooperation with the Presbyterian Hospital over a thousand nose and throat operations can be performed each year. But to have this work well done with the least possible loss of time and effort, it is absolutely necessary for all patients scheduled for these operations to be prepared, carefully checked, and ready as soon as there is vacant space in the hospital. It is also extremely important to have all patients carefully watched for a few days after their return home.

The Visiting Nurse Association of Chicago has a large staff of nurses constantly covering every field district in the city. All the work of checking the condition of patients immediately before they come to the dispensary for operation, as well as the visiting necessary to make sure that there are no unattended complications afterwards, is done by their nurses. While a great amount of service is rendered by them to patients in all departments of the dispensary, there is no division of this work which is so carefully and thoroughly done as that for the nose and throat group. This efficiency is made possible through the effective carrying out in each case of every detail of a carefully worked-out plan.

All patients who come to the nose and throat department, for whom operations are recommended, are listed and given a definite appointment for operation. In actual practice, during the last few years, such operations have been scheduled from two to six weeks in advance.

The chief of the nose and throat department has written out and distributed to all nurses a little pamphlet telling what should be done for patients before and after operation. These instructions are quoted below:

Instructions to Nurses

All patients of the Central Free Dispensary, Chicago, Ill., who have been scheduled for tonsillectomy should be visited, preferably on the day before operation, and again on the day following their dismissal from the hospital. It is of the utmost importance to guard against bringing a patient into the hospital for operation who has any acute infection. It is of equal importance that the development of any post-operative complication be reported to the dispensary at once.

Each patient should be instructed to bring a specimen of urine to the dispensary when he comes for operation. The specimen should be collected that same morning on arising. Care should be exercised to see that he has a suitable bottle for this purpose.

When calling on a patient before operation, make the following inquiries and observations:

(a) Is the patient prepared to go to the hospital on the date scheduled?

(b) Has the patient suffered any serious illness since the examination at the dispensary when operation was recommended?

(c) Is the patient suffering from an acute cold, bronchitis, or sore throat? If severe or associated with rise of temperature, advise patient to postpone operation until fully recovered, when he should visit the dispensary and secure another appointment. Notify the dispensary of the postponement.

(d) Examine the patient for lice; if these are present, instruct the patient how to dispose of them, as all lice should be disposed of before he is admitted to the hospital.

(e) Has there been any recent case of infectious or contagious disease in the home?

(f) Breakfast may be eaten at the regular time on the morning of the operation.

When calling on a patient after operation, ascertain the following:

(a) In case of bleeding, have the patient return to the dispensary. If patient is unable to come to the dis-

Adv. page 50

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pensary, telephone the dispensary for instructions. If after hours, telephone the Presbyterian Hospital.

(b) Has the patient elevation of temperature? If above 99½ degrees, advise patient to remain quietly at home until this has subsided.

(c) See that patients old enough to use gargle are instructed to gargle with warm soda solution every three or four hours until throat is healed—about one week. (A teaspoonful of ordinary baking soda in a tumbler of warm water.)

(d) When there is an earache associated with an elevation of temperature above 100 degrees, ask patient to report to ear department for examination of ears.

(e) After operation advise patient to return to the dispensary *twice* for examination—once about one week after operation and again two weeks after operation.

How the System Operates

A list of patients who are to have tonsil or adenoid operations is sent two weeks in advance to the Visiting Nurse Association. These calls are districted and sent out, and in so far as the nurse can manage, a call is made on the patient forty-eight hours before the date of operation. If the nurse finds anything in the home or neighborhood which makes her think it unsafe to operate on that particular patient at that time, the patient is told to wait until he is notified of a future date. The nurse then informs the dispensary which has a "waiting list" from which another patient is chosen to fill the vacancy. In this way the maximum number of patients are cared for—the surgeons' time saved and the hospital beds set aside for these cases are filled.

The names of cases needing post-operative visits are telephoned to the Visiting Nurse Association on the morning following the operation, so that the patient may be seen soon after he reaches home.

Advantages in Follow-Up Work

This careful follow-up work has prevented two catastrophies; one of these patients might have died if the nurse had not been watching the case and secured a doctor from Presbyterian Hospital within an hour; the patient was in the hospital before nightfall.

In other cases the fact that the nurse is closely following the convalescence of the patient has prevented possible ear trouble and other complications. Usually, however, the nurse needs to do nothing more than take a temperature and reassure the mother about the condition of her child's throat, giving her advice as to proper diet and care during convalescence.

While these activities may seem extra work for the Visiting Nurse Association, in reality, it is not entirely an added burden. For many of the cases already are on their books or are members of families known to them.

Since the remaining ones really need a visiting nurse, the Association does not consider serving them as an extra financial load, as the work incident to their care has been arranged to fit into the regular routine.

PHILADELPHIA DIETITIANS HOLD BANQUET

(*Continued from page 374.*)

it was not long before the small banquet room sounded like an old time country party.

The association received an invitation to attend a joint meeting of the Interstate Dairy Council and the Home Economics Association in Conwell Hall, Temple University, Wednesday, February 25. Dr. Cornelia Hedges, Chicago, Ill., was scheduled to speak on that occasion.

After the dinner, which all pronounced a decided success, we were taken on a tour of the three hotel kitchens.

(*For Dietitic News Notes see page Adv. 80*)

MISS NUTTING RESIGNS PROFESSORSHIP AT TEACHERS' COLLEGE

One of the outstanding features of the annual reunion of the alumnae of the department of nursing, Teachers' College, Columbia University, New York, N. Y., held February 12, was the announcement of the resignation of Miss Adelaide Nutting, professor of nursing education, who has been with the institution for the past eighteen years. Miss Nutting's resignation will take effect at the end of the present year when she will be succeeded by Miss Isabel Stewart, associate professor of nursing and health, who has been closely associated with Miss Nutting for the past sixteen years.

In 1907 Miss Nutting came to Columbia University from Johns Hopkins Hospital School of Nursing where she was director, to assume the position of professor in charge of the department of institutional administration under the department of household economics. This was a significant event in the nursing world, as it was the first time in history that nursing was represented on the faculty of an academic institution. The department has thus grown from a branch of the department of household economics to an endowed school with a curriculum covering all branches of nursing, teaching, supervision, public health and administration of schools of nursing; from one instructor to six full-time instructors and a staff of nine visiting lecturers; from two students to 300.

The following talks were given at the meeting: "Job Analysis as a Basis for Curriculum Making," by Dr. Snedden, professor of educational sociology, Teachers' College; "What is Public Health Nursing?" by Miss Anne Stevens, executive secretary, N.O.PH.N.; "To What Extent Can the Fundamental Principles of Public Health Nursing be Included in the Undergraduate Curriculum," by Miss Effie Taylor and Miss Amelia Grant, Yale University School of Nursing, New Haven, Conn.; and "What Adjustments Should be Made in the Preliminary Course," by Miss Carolyn E. Gray, New York, N. Y.

A number of nurses representing foreign countries spoke at the alumnae reunion banquet held at the new international house. Some of the countries represented were China, Japan, Philippine Islands, Holland, Hebrides Islands of Scotland, and Denmark.

NEW ENGLAND DIVISION OF A. N. A. TO MEET JUNE 3-4-5

The New England Division of the American Nurses' Association will hold the 1925 convention in Boston, June 3-4-5, with headquarters at the New England Women's Club, 585 Boylston street, Boston, Mass.

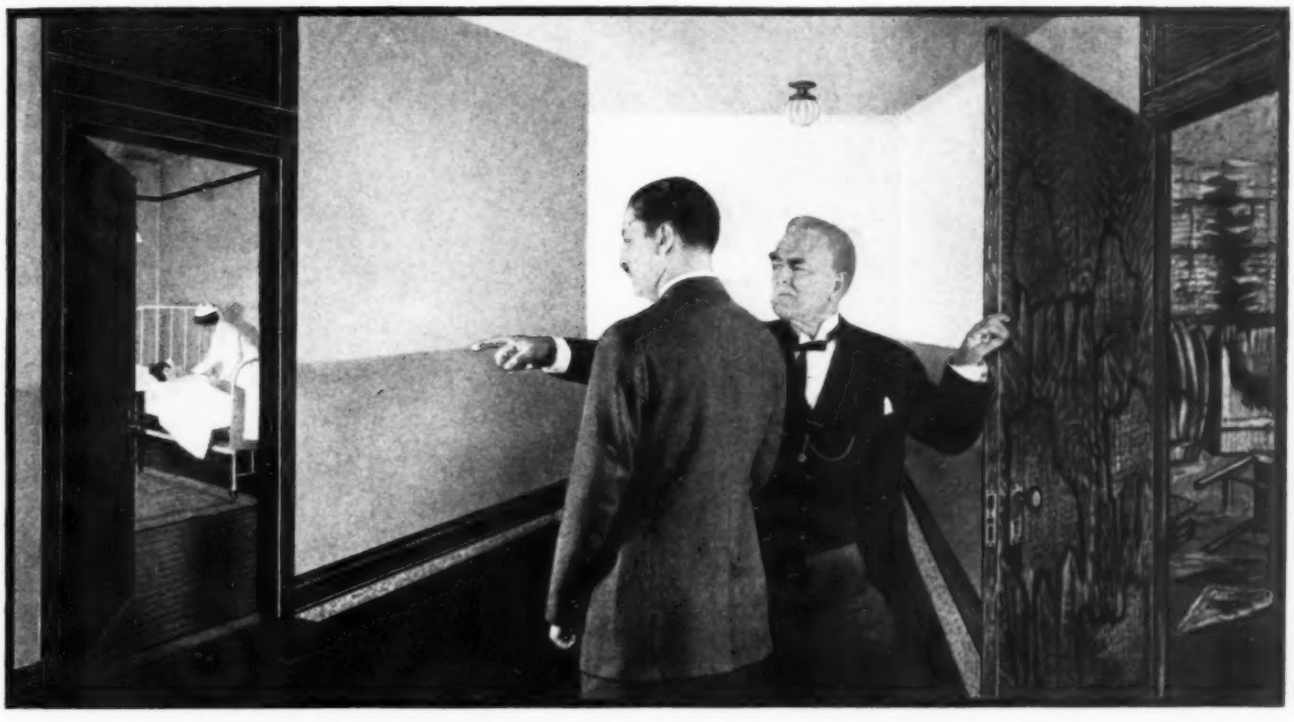
The hotels within walking distance of headquarters are: The Brunswick, Copley Square, Copley-Plaza, Lenox, Vendome, Victoria and the Westminster.

The chairman of the arrangements committee is Miss Carrie M. Hall, superintendent of nurses, Peter Bent Brigham Hospital, Boston, Mass.

DATE CHANGED FOR GUILD MEETING

The date of the annual meeting of the International Guild of Catholic Nurses which is to be held at Springbank, Okauchee, Wis., has been changed to May 31-June 6, instead of from May 24-30. This change was necessitated because of the conflict with the annual meeting of the National League of Nursing Education.

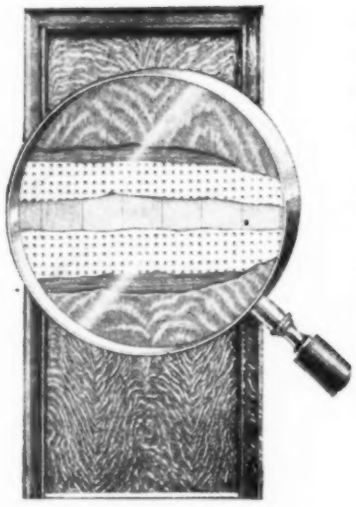
Adv. page 52



The alarm that never spread

THOUGH fire raged just across the hall, the critical case lying behind Pyrono's protective barrier was entirely oblivious to the alarm. The door to her room, while similar to any door in her home, kept from her not only knowledge of the existing danger, but all suggestion of fire hazard.

Pyrono Doors and Trim are built of the finest cabinet-wood veneers applied over a non-resinous, laminated core. Between veneer and core, however, is placed asbestos sheathing which is mechanically bonded to the core.



This shows Pyrono construction magnified—the asbestos sheathing indented into the core and the cross-banded surface veneers applied over it

The result is fireproof construction, presenting at the same time all the attractiveness of the most beautiful woodwork. Pyrono Doors can be fitted with smoke-proof and practically soundproof tightness because under extremes of temperature they do not expand, contract, warp, buckle nor bind in their frames. No danger of being trapped by a jammed door.

Let us send you our booklet of important installations together with a folder of detail drawings.

The Compound & Pyrono Door Co.

ST. JOSEPH, MICHIGAN

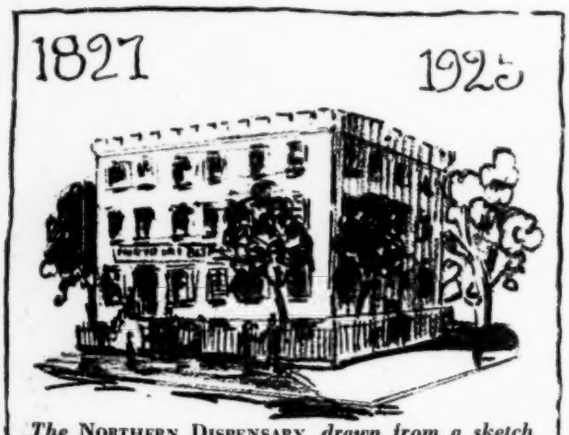
Py-ro-no

TRADE MARK REGISTERED

THE WOOD VENEERED DOOR WITH THE FIREPROOF CORE

NINETY-EIGHT YEARS OF DISPENSARY SERVICE

This and the following drawings are reproduced from a booklet recently issued by the finance committee of Northern Dispensary, New York, N. Y. This booklet gives in tabloid form descriptions of the life and superstitions of the period when the dispensary was opened—in 1827—as well as data about its activities then and now. Its



The NORTHERN DISPENSARY, *drawn from a sketch made in 1860—the earliest picture we have been able to discover so far.*

present home was built in 1831, four years after the founding of the dispensary. "Do you know," the author of the booklet inquires, "that about the time it was founded, pumps, cobblestones, and a high death rate among children were conspicuous features in this city, that about 500 babies in every 1,000 born died, as against eighty now?"

The Dispensary in 1827

In 1827, as the illustration below shows, the dispensary doctor not only treated patients at the clinics but also visited the sick with his horse and gig. And the next picture indicates that, although horses and gigs have gone out of fashion, dispensary doctors will still answer calls of patients too ill to attend the clinics. In this particular instance the visiting doctor is answering a call from West Houston street.

Has Given 1,500,000 Treatments

Northern Dispensary has given over 1,500,000 treatments, over 17,000 of which were in 1924. Some of their patients have been going there for over fifty years. "The other day," the booklet relates, "a man dropped in from St. Louis, Mo., to thank us for having 'saved his life' some twenty-seven years ago." And just to indicate how varied are their patients' ailments, the booklet queries, "Do you know that there is still some superstition and much ignorance around? One of our patients, it appears, meditating upon the dietary success of his pet canary, decided that sand must be good for indigestion. After an accumulation of a half pound or so of sand in his stomach, he came around to us in great distress, seeking relief!"

Other items are thus amusingly told all of which make the whole booklet worth reading.

DEATH RATE FROM ALL IMPORTANT CAUSES DECREASED IN 1924

The year 1924 was the first year in which every important cause of death registered a decrease from the year previous. This is the information presented in the Statistical Bulletin of the Metropolitan Life Insurance Company, New York, N. Y. Among about one-seventh of the combined population of the United States and Canada the death rate was 8.5 per thousand, which was 5.2 per cent lower than the year before. This record is due, it is said, to the absence of epidemic prevalence of any disease. The epidemic diseases of childhood registered the lowest rates on record, their combined death rate declining more than 20 per cent. The diphtheria death rate, in particular, was far the lowest ever recorded by this company and represents a drop of 50 per cent from the rate of ten years ago. This is credited to the increasing use of the Schick test and toxin-antitoxin and to the early administration of antitoxin to children with diphtheria. Notwithstanding a drop in the cancer death rate, it is still identical with that of three years ago and higher than for any year previous to 1921.

The death rate from accidental causes combined was 62.5 per hundred thousand. There were fewer deaths from falls, machinery and railroad accidents, but deaths in automobile accidents again increased, the rate being 16.0 as compared with 15.4 in 1923. The mortality from automobile accidents has more than doubled since 1916, has tripled since 1915, quadrupled since 1913, and increased sevenfold since 1911.

To enjoy the benefits of Providence is wisdom; to enable others to enjoy them is virtue.—*Persian.*

Adv. page 54

FAITH

Faith in Religion—in American institutions—their ideals, spurs us on to greater achievements.

Faith in others—to recognize superior quality and workmanship—to appreciate the true value of *Good Glass Service* makes us strive to supply at all times *Glassware of Service.*

HAZEL-ATLAS TUMBLERS
have that smooth finished edge, clear color, sparkling polish and smooth bottoms.

OUR H MONOGRAM
guarantees highest quality and lowest prices.

Sold only through merchants.

Ask your supply house for samples and prices.

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FIRE PREVENTION DEPARTMENT

Conducted by W. M. Krieger, Engineer,
209 West Jackson Boulevard, Chicago, Ill.

DO YOUR POLICIES CONTAIN A COINSURANCE CLAUSE?

OF THE more important clauses in current use on insurance policies, the one most frequently used, most severely criticised, most misunderstood, most legislated against and, after all, the most reasonable and most equitable, is that which in general terms is known as the "coinsurance clause."

Insurance is one of the great necessities of every enterprise in social and economic life, and the expense of maintaining it should be distributed among the property owners of the country as equitably as is humanly possible. Losses and expenses are paid out of premiums collected. When a loss is total the penalty for under-insurance falls where it properly belongs, on the insured who has elected to save premium and assume a portion of the risk himself, and the same penalty for under-insurance should, by contract, be made to apply in case of partial loss as applies automatically in case of total loss.

What's in Your Policy?

When last did you look at your fire insurance policy?
Is it still in force?
Does it cover as you want it to?
Is the amount insured ample?
Are you violating any of its conditions?
THESE ARE VITAL QUESTIONS—CAN WE HELP YOU ANSWER ANY OF THEM?

Few Losses are Total

Comparatively few of the great number of fires in this country result in total losses. Occasionally a fire gets beyond control and destroys other buildings as well as the one in which it originated. It is apparent, even to the casual observer who bases his conclusions on personal observations alone, that most of the fires in any locality having adequate fire-fighting facilities are small ones, and result in small losses. An analysis of the fire loss data confirms this impression and discloses the further fact that these fires of small size are not only greatest in point of numbers, but the aggregate loss from them is surprisingly large in comparison with the total fire loss of the country.

This characteristic is not peculiar to fire losses. Statistics of accidents and sickness reveal that the aggregate time lost from sickness or accidents which disable only for a few days is far greater than the aggregate time lost from permanent disabilities. The reason for this is that very few people become permanently disabled, whereas a great number are disabled for a short time. Losses sustained by automobiles in accidental collision are generally small in size, but quite large in number.

These various types of loss present similar problems to companies granting insurance protection. Sufficient premiums to pay all losses must be collected, and equity must be established among policy holders so that each actually pays for the protection received.

Object of "Waiting Period" Clause

Since an insurance company must collect enough premiums to pay every loss for which it may be liable by the terms of its policies, obviously it need not charge so much if the insured will agree to bear the small losses himself. This is accomplished for accident and health insurance by the inclusion in the contract of a clause providing for a designated "waiting period," such as one week, two weeks, a month or longer. Benefits for disability do not become payable until the expiration of such period. In automobile collision insurance, a "deductable" clause may be endorsed on the policy by the provisions of which the insured must personally bear the first $50 or $100 of each loss. Of course, if the insured desires protection against every accident, regardless of size, he can obtain it by paying a higher premium.

Coinsurance or Reduced Rate Average

Because fire insurance underwriters understand this principle and because they desire to recognize it in the rate, the coinsurance, or reduced rate average, clause has been very generally adopted throughout the country for the purpose of permitting a discrimination in favor of those risks which offer the greater probability of salvage. This probability of salvage is, of course, present when insurance approximating the value of the property is carried by the assured, so that a partial loss to the property means also a partial loss to the insurance company; whereas, when a light proportion only of the value of property is covered by insurance, a small loss to the property may mean a total loss to the company, and therefore where light insurance is carried there is no expectation of salvage so far as the company is concerned.

These considerations do not apply in the case of total

Adv. page 56

Delicious Hot Toast
—without fuss or bother!

YOU know the value of good, hot, crisp toast in the diet. You also know the time and trouble and waste incurred in making it the usual way.

But do you know that there is an automatic electric toaster now in use in many of the leading hospitals in the country

—which enables them to make crisp, tender, evenly browned toast in any quantity, without having to tend the toast at all?

—which makes it possible always to serve the toast piping hot?

—which automatically makes toast for the next patient while one patient is being served?

—which saves the time and waste of having ever to scrape or re-toast the bread?

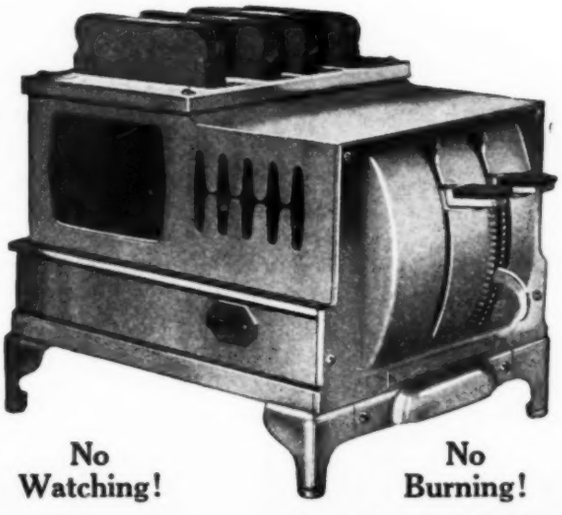
—which makes the toast at less cost than with gas?

This machine is called the TOASTMASTER Automatic Electric Toaster. Because of its patented automatic mechanism, and an adjustable timing feature, any kind of bread, fresh or dry, can be toasted to just the right degree—*without watching, without burning.*

(Toast pops up when done and current automatically shuts off. Oven heat of toaster keeps toast hot until served.)

Some Hospital Users of the TOASTMASTER

Johns Hopkins Hospital, Baltimore
St. Lukes Hospital, Chicago
Mt. Sinai Hospital, Cleveland
Battle Creek Sanitarium
Harper Hospital, Detroit
Columbia Hospital, Milwaukee
Royal Victoria Hospital, Montreal, Canada
and scores of others



No Watching! No Burning!

The 4-slice TOASTMASTER shown is for the diet kitchen. There is also a 12-slice size for main kitchen use. Make toast-making a simple, easy matter. Improve service. Please your patients. Equip your hospital with one or several TOASTMASTERS. Write now for full information.

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Chicago Sales Office: 123 W. Madison St.

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New York, N. Y.

Sold by leading Hospital Equipment Dealers.

TOASTMASTER
Automatic Electric Toaster

losses, for where property is totally destroyed there can be no salvage either to the assured or to the company, consequently the coinsurance or reduced rate average clause, as it is now commonly called, has no application whatsoever to losses which cause a destruction in excess of 80 per cent of the value of the property insured.

We will assume that A owns a property valued at $10,000, which he insures for $8,000, and B owns a property of similar construction, occupancy, and exposure, also valued at $10,000, which he insures for $5,000 (no coinsurance clause being attached to either policy).

A fire occurs by which both buildings are damaged 50 per cent of their value, or $5,000 each.

The building insured by A has $8,000 insurance with which to pay a loss of $5,000, while the building insured by B has but $5,000 insurance to pay the loss of $5,000; therefore in naming a rate on any risk insured under similar conditions would it not be fair and equitable to give A the benefit of a rate lower than B, as the amount of insurance carried by A enabled the companies to pay him his entire loss and at the same time recover a moderate salvage, whereas in the case of B there is a total loss to the companies and but 50 per cent loss to B. Therefore, in order properly to adjust such inconsistencies it was agreed to adopt the coinsurance, or reduced rate average, clause which is mutually helpful both to policy-holders and the companies.

How the Coinsurance Clause Works

When the 80 per cent, or reduced rate average, clause is attached to a policy it means that the assured agrees to carry insurance equal to at least 80 per cent of the value of the property involved; failing to do so, he can recover only such proportion of any loss amounting to less than 80 per cent of the value of the property insured as the amount of insurance he actually carried bears to the 80 per cent of the value.

Thus, if the value is $10,000 and he carries $5,000, he can recover but five-eighths of any loss that amounts to less than $8,000; that is to say, of any loss which amounts to less than 80 per cent of $10,000.

On the other hand, however, when the assured carries insurance equal to 80 per cent of the value of the property insured, the 80 per cent coinsurance, or reduced rate average, clause is of no effect, and the assured will recover the entire amount of his loss be it large or small, not exceeding, of course, the amount of the policy.

The 90 per cent and 100 per cent reduced rate average clauses operate in a manner similar to the 80 per cent reduced rate average clause.

The assured should bear in mind that the coinsurance, or reduced rate, clause is inoperative and of no effect when the insurance carried is equal to or exceeds the amount required by such clause, or where the property is totally destroyed, even though in the latter instance the assured has failed to comply with the requirements of the clause.

Insurance Clause in Practice

The purpose of the coinsurance clause is to distribute the fire loss equitably among policyholders. Owners wishing to under-insure are prevented from shifting part of their burdens to others who desire, or are required by bankers or creditors, to carry full protection. Rate discrimination is avoided.

The operation of the clause furnishes an incentive to the policyholder to insure his property fully and to increase his insurance when there is an appreciation in property values.

The following illustrations will serve to indicate the manner in which losses are settled under an 80 per cent clause. The business man may calculate the indemnity to which he would be entitled under his coinsurance clause by using the following illustrations as models:

A

Where insurance exceeding 80 per cent of value is carried:

Value of property	$10,000
Insurance required	8,000
Insurance carried	9,000

All losses up to $9,000—paid in full.

B

Where insurance to 80 per cent of value is carried:

Value of property	$10,000
Insurance required	8,000
Insurance carried	8,000

Losses exceeding $8,000—face of policy paid ($8,000)
All losses under $8,000—paid in full.

C

Where insurance to less than 80 per cent of value is carried:

Value of property	$10,000
Insurance required	8,000
Insurance carried	5,000

Losses exceeding $8,000—face of policy paid ($5,000)
All losses under $8,000—paid in proportion that $5,000 bears to $8,000 or five-eighths of loss.

Do the insurance policies on your hospital property contain a coinsurance clause? If so, are you maintaining a sufficient amount of insurance to comply with your coinsurance contract?

N. Y. NURSERY AND CHILD'S HOSPITAL ADVANCES PAINLESS CHILDBIRTH

During the last seven months we have been trying out a new anesthesia, adapted by Dr. J. T. Gwathmey, for use in reducing labor pains. In the several hundred cases for which it has been used in this hospital there is not one single failure. The babies have been unaffected in any way so far as the most thorough examination can reveal, and have, if anything, come into the world a little better off than the average child due to the absence of struggle on the part of the mother. For the mother, it has practically eliminated the pains of labor.

The new anesthesia is not twilight sleep and is without toxic effect. It consists simply of the use of morphine in a solution of epsom salts, which prolongs and increases the morphine effect, thereby reducing the pains to a minimum. The mother dozes off in a semi-conscious state, from which she can be aroused at any time to obey instructions given by the doctor. Labor continues freely inasmuch as the mother does not feel and so does not fight the pains.

The simplicity of the treatment, its freedom from any after effect and the fact that it may be administered without special equipment should eventually bring it within the reach of women throughout the entire world. No woman for whom this anesthesia is recommended should be denied it, whether private or free patient. Because of the close and extended supervision required, it costs more to administer, but we are confident that our friends will come forward to provide the necessary funds. —The *Bulletin*, New York Nursery and Child's Hospital.

"Back of the deed is the doer,
Back of the doer the dream,
Back of the world as we see it
Science of things as they seem,
Waits the invisible spirit
Weaving an infinite scheme."

Adv. page 58

In Surgical Sutures

SATISFACTION lies in strength, sterility and uniformity of absorption, features to be obtained only when the smooth or detached side of selected sheep but is employed. Right now the price of raw material is very high. Some manufacturers are evening up things by using the mesenteric as well as the smooth portion of the intestine. None of the cardinal qualities can be guaranteed when the rough side is employed. This is obvious to the man who has studied the manufacture of catgut.

In the Armour Laboratory nothing but the smooth, straight side of the gut is put into surgical ligatures. This material is sterilized chemically and thermically at opportune stages and finally the finished suture is, after being placed in tubes, subjected to a degree of heat that means death to all spores and organisms.

The Armour Non-boilable Catgut Ligatures are as flexible as a silk cord, and are of full strength and absolute sterility.

Specify Armour's Non-boilable Catgut Ligatures. You will be satisfied.

PITUITARY LIQUID (Armour) the Premier Product of the kind, 1 c.c. ampoules—surgical, ½ c.c. ampoules—obstetrical.

SUPRARENALIN SOLUTION 1:1000—Astringent and hemostatic. Stable and non-irritating.

PHARMACEUTICAL PRODUCTS

Headquarters for the Endocrines and other Organotherapeutics

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ARMOUR AND COMPANY : : CHICAGO

MEETINGS, CONVENTIONS AND CONFERENCES

HOSPITAL SERVICE CONFERENCE DISCUSSES OPEN VS. CLOSED HOSPITAL

EDUCATIONAL opportunities in open and in closed hospitals was the leading topic on the program of the meeting of the American Conference on Hospital Service, held in Chicago, Ill., March 12, as a part of the annual Congress on Medical Education, Medical Licensure, Public Health and Hospitals of the American Medical Association.

The meeting opened with the annual report of the Hospital Library and Service Bureau, the central bureau, or clearing house, of the American Conference on Hospital Service, read by Miss Donelda R. Hamlin, director of the bureau. Miss Hamlin stated the purpose, explained the organization of the bureau and traced its development up to the present time, describing the wide range of service which it offers to hospital people. She explained briefly the two types of services offered. One type is that of the service bureau through which thousands of inquiries on the development and management of hospitals are answered each year through the material collected by the bureau.

Underwood & Underwood.

A prominent triumvirate at the annual Congress on Medical Education, Medical Licensure, Public Health and Hospitals, held in Chicago, March 9-12. (Left to right) Dr. Edward R. Stitt, surgeon general of the U. S. Navy; Dr. Ray Lyman Wilbur, president, Leland Stanford University, and Dr. Merritte W. Ireland, surgeon general, U. S. Army.

The other type of service is the library which contains the most complete collection of hospital literature in existence. The library is circulated by means of package libraries which number more than 1,500 at the present time. The library also contains a bibliography department which, upon request, compiles bibliographies. The department on hospital construction has as its special feature an educational exhibit of floor plans of over seven hundred hospitals, nurses' homes and allied institutions. From time to time, special studies are made by the bureau the most recent of which is an informal study of the educational facilities for colored nurses and their use in hospitals and public health nursing.

The report was followed by a paper on "The Extension of Hospital Privileges to all Practitioners of Medicine," by Dr. S. S. Goldwater, director, Mount Sinai Hospital, New York, N. Y., president of the conference. The paper appears in full on page 303 of this issue.

Summary of Hospital Facilities

A statistical summary of hospital facilities and the medical profession in the United States was given by Mr. Homer F. Sanger, Council on Medical Education and Hospitals, Chicago, Ill., who presented data of the results of questionnaires sizing up the hospital situation in the United States. Answers to the question regarding the hospital's policy concerning physicians not on the attending or consulting staff showed that 40 per cent of the hospitals answering preferred the open hospital, while 17.8 declared themselves in favor of the closed hospital. The remaining 41.5 per cent omitted to answer the question. In a survey of six states the percentage of hospitals with respect to ownership or control in relation to the open policy showed that of the hospitals owned individually or by a partnership 77 per cent were open and 22 per cent closed; of the independent hospitals, 72 per cent were open and 28 per cent closed; of those controlled by churches, 61 per cent were open, and of city hospitals, 82 per cent were of the open type.

In determining what proportion of physicians have hospital relations, the results of the questionnaire showed that in the state of New York, 3,202, or 36.8 per cent, were affiliated with hospitals. In the city of Chicago, Ill., where there are 5,868 physicians but 1,421, or 24.2 per cent, are on hospital staffs. Mr. Sanger brought out that there has been a gain of 455 hospitals in the past five years, 378 of which are open and 77 of which are closed. Prior to 1920 the ratio of hospitals in favor of the open staff policy was two to one, while today it is five to one. Of the 100 general hospitals opened in 1924 the vote was seven to one in favor of the open hospital.

Adv. page 60

The Ariston Line

ARISTON
Supreme Quality
Gelatine Desserts

1892 1925

Coffees
Teas
Cocoas
Spices
Gelatine Desserts
Flavoring Extracts
Baking Powders
Pudding Powders
Marshmallow Topping
Brosia Meals
Magic Solvent

Be sure to get Our Price List Regularly

One Grade Only **Quality Never Reduced to Meet Price Considerations**

Gelatine Quality
Flavor Delicacy

The supremacy of Ariston Gelatine Desserts is founded upon these two big factors in their composition—factors that have established the popularity of these delicious Desserts in the hospital fields and made them the standards of comparison wherever used.

1. Gelatine Only the purest gelatine should ever be considered for use as food—and Ariston Gelatine is pure. You may prove its "food fitness" to your own satisfaction by noting the wholesome aroma given off when boiling water is added. A pure gelatine will never yield an offensive odor.

Ariston Gelatine is low in bacteria count. It does not break down quickly, but remains a firm jelly for days.

It has high jelly strength. This is real economy, because larger proportions of water may be added in its preparation for use.

2. Flavor Only true fruit flavors are used in Ariston Gelatine Desserts. The flavors are definite—each one readily distinguishable. The flavors are delicate—unimpaired by an excess of acid. (Acidity is no substitute for delicate flavor.)

Gelatine Purity assures wholesomeness as a good food. Fine Flavor assures enjoyment of the perfect product. Ariston Gelatine Desserts merit their popularity.

CALUMET TEA & COFFEE COMPANY
409-411 WEST HURON ST.
CHICAGO, ILL.

"Educational Opportunities of the Open Hospital," was the subject of the paper read by Dr. Malcolm T. MacEachern, associate director, American College of Surgeons, hospital activities, Chicago, Ill. At the outset Dr. MacEachern admitted that a higher type of service is maintained by the closed hospital but that the open hospital is better for the community. He brought out that the educational possibilities of the open hospital are not yet realized and that it remains for the open hospital to make more compact its loose type of staff organization in order to be able better to extend its educational facilities to the community.

Dr. MacEachern stressed the need for practitioners to continue their studies, as the education of the physician and surgeon but begins at graduation. He said that in order for the profession to fulfill its obligations to the patient, the individual physician will have to be brought to the realization of the necessity for post-graduate courses, lectures and clinics which should be offered by the hospital in its rôle of community reservoir of medical knowledge. He believes that it is the hospital's duty to arrange educational features such as group conferences and study clubs to meet weekly. When properly conducted, the staff conference, he brought out, is one of the best factors in disseminating medical knowledge. Because of the size of its staff, the open hospital has this educational advantage over the closed hospital. The open hospital also has the added advantage of more extensive clinical facilities the educational opportunities of which should be extended to the community by means of a weekly clinical day which he outlined hour by hour. He also advocated a clinical week at the hospital and urged open hospitals to develop their medical libraries to the fullest extent for the benefit of practitioners in the community.

Improvement of Intern Supervision

From the standpoint of the educational opportunities of the intern, Dr. MacEachern admitted that open hospitals, because of the looseness of the staff organization do not offer the supervision necessary to adequate training. However, he believes that this can be overcome through the appointment of a man in whom is invested the responsibility of intern supervision and by proper clinical work through lectures and group conferences.

Thus, properly organized and with the right attitude toward its responsibility, the open hospital has the advantage over the closed hospital, although, at present, the semi-closed hospital is the best type of institution educationally and professionally.

Opportunities of the Closed Hospital

"Educational opportunities of the Closed Hospital," were presented by Dr. A. C. Bachmeyer, president-elect, American Hospital Association, Cincinnati, Ohio, who outlined the distinct advantages of the closed hospital, particularly in the matter the superior type of service offered and in its compact staff organization. He brought out that in the closed hospital only the physicians and surgeons definitely appointed or elected can attend patients. This arrangement permits of an esprit de corps and teamwork not found in the open hospital. Through its efficient records, the open hospital provides statistical work for community programs of education.

In the education of interns and nurses, Dr. Bachmeyer said that it was almost imperative that the teaching hospital be closed, since a definite program of instruction can be more easily carried out under this type of staff organization where attention is focused on the teaching of interns and nurses.

He believes that the intern should have first introduction to cases in the wards rather than in the dispensary and that there should be conscientious following of work from the hospital to the dispensary and vice versa in rotating service. He advocated that intern societies should be organized in the hospital and should hold meetings similar to the regular staff meetings.

The open hospital also offers greater opportunities for the development of graduate courses, as many offer three or four years in specialties, and are in a position to offer special courses to practitioners.

Dr. Bachmeyer summarized the advantages of the open hospital as distinct advantage to patients through the higher type of service; advantages to the staff members, as appointment is a recognition of merit; advantage to interns, as attention must constantly be given to the patient; advantages to medical students through contact with men of ethical methods and superior workmanship; advantages to nurses, through the example of workers who make service paramount; advantages to the community, through a higher type of service; advantages to physicians through research and the stimulus to better work; advantages to the hospital, by virtue of its reputation in the community.

The papers were briefly discussed by Dr. N. P. Colwell, Council on Medical Education and Hospitals, American Medical Association, Chicago, Ill., who believes that the hospital is the key to the rural district problem of medical service. He said that although the general hospital was the best means of providing training for interns, there is need for special hospitals to offer adequate training in the specialties. He stressed the hospital's influence in the community in keeping the public better informed.

The following are the officers elected at the business meeting of the conference; honorary president, Dr. Frank Billings, Chicago, Ill.; president, Dr. S. S. Goldwater, New York, N. Y.; vice-president, Dr. Ralph B. Seem, Chicago, Ill.; second vice-president, Miss Adda Eldredge, president, American Nurses' Association, Madison, Wis.; and treasurer, Dr. Harry E. Mock. The trustees elected are Dr. A. C. Bachmeyer, (re-elected), Dr. John M. Dodson, (re-elected) and Miss Ada Belle McCleery, superintendent, Evanston Hospital, Evanston, Ill. The new appointments on the library committee are Dr. William H. Walsh, executive secretary, American Hospital Association, Chicago, Ill., and Major Edward A. Fitzpatrick, dean, graduate college, Marquette University, Milwaukee, Wis.

LEAGUE OF NURSING EDUCATION TO MEET AT MINNEAPOLIS, MAY 25-30

The National League of Nursing Education will hold its annual convention in Minneapolis, Minn., May 25-30 with headquarters at the Nicollet Hotel. The advisory council of the association will meet there May 23.

Complete plans for the program have not yet been formulated but a few outstanding features planned for the conference have been announced. Arrangements are being made for a special tour for those who wish to visit the Mayo Foundation at Rochester, Minn., the day following the conference. Demonstrations in nursing procedures will also be given daily during the conference from 8 to 9 every morning at the Minneapolis General Hospital.

An outstanding diversional feature of the conference will be a concert by the Minneapolis Symphony Orchestra on Monday evening, May 25, at 8 p. m. The concert will be given under the auspices of the Minneapolis League of Nursing.

Adv. page 62

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PUBLIC wards, private wards, private rooms, doctors' and nurses' dining-rooms, service dining-room, and all the kitchens—each one with special requirements in china, glass, earthenware and silverware! We can supply their needs.

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We make no charge for supplying such an estimate, and it incurs no obligation on the part of the hospital. We are glad to have the opportunity to save the time of the stewards, dieticians, or matrons whose task it would be.

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Samples are gladly submitted.

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HOSPITAL EQUIPMENT AND OPERATION

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by HERMAN SMITH, M.D., Superintendent
Michael Reese Hospital, Chicago, Ill.

WHAT LAUNDRY TESTS SHOW ABOUT SHEETINGS

PROFESSOR Millard of the Massachusetts Institute of Technology, secured twenty-four sheets of different brands, from dry goods stores in five different cities. These sheets were washed repeatedly in a commercial laundry, in its regular flat work.

At intervals of twenty washings, samples were removed for test. The mechanical strength tests were made on warp and filling separately, using strips cut and threaded down to one inch in width, as prescribed for the American Society for Testing Materials. After hanging for several hours in a room the temperature of which was 70 degrees F., with 65 per cent relative humidity, the strips were broken on a standard testing machine, electrically operated, and with the standard jaw speed required in such tests. All sheets were washed in the same manner and in the same load, together with other goods.

Washing Operations a Test

These tests do not show the deterioration which comes from wear on beds, but in the case of a hospital this is so small that it may be said to be almost negligible. At any rate, it is fair to assume that a sheet which will best withstand the washing operation will best withstand ordinary wear and tear of hospital use. It is to be understood, of course, that if an improper washing process is used, with over-running and drastic treatment, the best grades of goods will last but little longer than the worst. This washing was done in a commercial laundry, with the general flat work, and as there is a greater amount of soil on this class of work than there is on hospital flat work, it is probable that the goods would last longer when washed by a proper process in a hospital laundry.

The twenty-four sheets tested were divided into five groups, as follows: Group 1, the best sheet; group 2, the second-best sheet; group 3, the best sheet of the remaining twenty-two; group 4, average of the twenty-two brands; group 5, poorest of these brands. The various breaking strengths were as follows, omitting fractions of pounds and giving the nearest number:

Best sheet: Initial strength, 55 pounds; 20 washings, 55 pounds; 40 washings, 52 pounds; 60 washings, 47 pounds; 80 washings, 42 pounds; 100 washings, 38 pounds; 120 washings, 34 pounds; 140 washings, 31 pounds; 160 washings, 27 pounds.

Second-best sheet: Initial strength, 53 pounds; 20 washings, 48 pounds; 40 washings, 44 pounds; 60 washings, 40 pounds; 80 washings, 37 pounds; 100 washings, 33 pounds; 120 washings, 30 pounds; 140 washings, 38 pounds; 160 washings, 25 pounds.

Best sheet of remaining 22 brands: Initial strength, 59 pounds; 20 washings, 48 pounds; 40 washings, 39 pounds; 60 washings, 38 pounds; 80 washings, 34 pounds; 100 washings, 30 pounds; 120 washings, 26 pounds; 140 washings, 22 pounds; 160 washings, 20 pounds.

Average of 22 brands: Initial strength, 54 pounds; 20 washings, 40 pounds; 40 washings, 33 pounds; 60 washings, 31 pounds; 80 washings, 29 pounds; 100 washings, 26 pounds; 120 washings, 22 pounds; 140 washings, 19 pounds; 160 washings, 16 pounds.

Poorest sheet: Initial strength, 40 pounds; 20 washings, 29 pounds; 40 washings, 24 pounds; 60 washings, 22 pounds; 80 washings, 21 pounds; 100 washings, 19 pounds; 120 washings, 10 pounds. The test of this sheet stopped at this point, because of the extreme weakness of the goods.

Some of the twenty-two brands are, of course, nearly as bad as the worst brand, which gave out at 120 washings and was not very strong when it was new. It is probable that the two best sheets would still have had a strength of approximately twenty pounds after forty more washings, or 200 washings in all.

Initial Breaking Strength

An interesting point which these tests bring out is the fact that the initial breaking strength does not indicate the number of washings the goods will withstand. For instance, the best sheet of twenty-two brands had an initial breaking strength of fifty-nine pounds, and this was the highest of the group. But this strength dropped suddenly, and after twenty washings it was only forty-eight pounds, while after forty washings it was only thirty-nine pounds. After 160 washings the strength was only twenty pounds, while two other sheets which had a lower initial strength had a final strength of respectively twenty-seven pounds and twenty-five pounds. In this connection it is well to remember that the sizing should be washed from goods before making a test to determine initial strength.

In case each of twenty-four hospitals should buy one of the different brands tested, the result would be about as follows: Three would have a sheeting that would stand, perhaps, 200 washings. Some of the remaining eleven would have sheeting that would stand 160 washings and others of this group would have sheeting which would give out at 120 washings. This, of course, would be in case the washing process was the same as that of the other laundry, with no unnecessary roughness in the handling of the goods. As has been pointed out, in a hospital laundry there is no great amount of soil on the linen and therefore a long and violent washing process is not necessary. While it is true that in some cases the laundry is responsible for excessive cost of linen replacements, and while it is true that in such cases good fabrics will last little if any longer than bad, an economy can be effected in most hospitals by making a careful selection of goods, with a view to the number of washings it will stand.

Nothing can work me damage except myself; the harm that I sustain I carry about with me, and never am a real sufferer but by my own fault.—*Emerson.*

Adv. page 64

As sure as the prescriptions you administer

IN PRESCRIBING for their patients, doctors **know** exactly what results to expect. They cannot afford to take chances with products of doubtful efficacy.

That is why, throughout the country, doctors and nurses specify Kellogg's ALL-BRAN—why it is in constant use in hospitals. Kellogg's is 100% bran. It can be relied on to bring 100% results. You know its contents and can bank on it. You never can be certain of results from bran foods of unknown fibre content.

The ready acceptance by patients is another point in the favor of Kellogg's ALL-BRAN. Cooked and krumbled by the special Kellogg process, it is crisp, nut-like, appetizing. Patients will take it regularly, instead of "forgetting it."

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SURGERY OF MALIGNANCY WITH THE ENDOTHERM

By A. MUTSCHELLER, M.D., New York, N. Y.

THE removal of malignant tumors is in itself a surgical procedure not different from other surgical methods, but it is almost invariably found that recurrences of the disease which often develop within a very short time after the operation, make surgical interference unjustified. It seems, therefore, that in the surgery of malignancy, there are factors involved which have nothing to do with the surgical methods themselves but which appear to be based upon other conditions usually not present when infectious diseases, such as trauma, and others, are treated surgically.

Two Factors in Controlling Malignancy

Modern studies on the origin and character of malignancy have established the fact that two factors are prominent in controlling the development and progress of malignancy. Prior to the onset of the infection there is present a favorable predisposition which, according to the best evidence now available, is thought to be hereditary. Dr. Maud Slye, Chicago, Ill., has been able to reproduce this condition by interbreeding rats, according to a certain rule which she herself discovered. The establishment of the existence of this hereditary influence through these experiments with rats, seems well supported.

Irritation—A Dominant Factor in Development

The second dominant factor in the development of malignant tumors seems to be irritation. It is quite generally observed that there is always one or another causative factor when a malignancy develops, and this causative factor seems to consist in a continual irritation at the place where the tumor developed.

From this brief review, therefore, it may be inferred that if a patient has a malignant tumor and this tumor is disturbed surgically, some of the malignant cells may easily pass over into the blood stream, be carried to some other part of the body and there begin to form new growths. It is thus easily conceivable that if a malignant cell is carried along in the blood stream, it may easily be deposited in some other part of the body and very readily give rise to new developments. As experience proves, these new growths do not consist of a new type of carcinoma cell but cells of the same character as those found in the primary lesion. From the type and shape of the cells found in a secondary lesion, it is always possible to determine the location of the primary tumor.

A Step in Prevention of Recurrences

From this stage of reasoning, it is an easy step to conclude that if the transfer of malignant cells to other parts of the body could be prevented, there would be absent at least one of the two factors involved in the production of malignant recurrences. In actual practice, it has been found that if the flow of blood during the operation is prevented and thereby all possibility of malignant cells entering the blood stream prevented, the formation of recurrences will be almost entirely eliminated.

At the present moment, there are two methods in use, not unlike one another but differing somewhat in technic. One, which is practiced by Dr. William L. Clark, of Philadelphia, Pa., consists in a coagulation process applied to the entire tumor mass whereby all the soluble protein substances are completely precipitated and coagulated to such a point that the mass so treated is practically solid and nearly carbonized. This mass, thoroughly toasted and destroyed, can be removed surgically without the flow of blood or the possibility of malignant cells entering into the blood stream. This method has been successfully employed for the removal of smaller growths and has produced very satisfactory results. For the removal of larger growths and for incision into deeper lesions in the body, the method of Dr. George A. Wyeth offers greater operative possibilities and has gained so much preference that it is now practiced in the largest clinics in the country. The technic of Dr. Wyeth, briefly outlined, consists in isolating the malignant growth from the circulatory system by inserting an ordinary sewing needle, connected to an electrode holder, into the tissue, and applying the coagulating current for a few seconds until a sufficient zone of coagulated material has formed around this needle. The needle is then reinserted a short distance away from the first place until the entire growth is isolated completely from the circulatory system. This zone of coagulated material does not consist of carbonized or charred tissue but rather of precipitated, soluble proteins contained in the blood. While these proteins are precipitated within the blood vessels they seal up these vessels and prevent the flow of blood either out from the vessels or by aspiration, through absorption of blood. This coagulated material is of such a nature that it is readily redissolved and reabsorbed by the action of the blood and

Adv. page 66

CONTROLLING HYPERACIDITY

Without Discomfort

CONTROLLING hyperacidity—preventing acidosis—is now almost a part of the routine work of hospitals, dispensaries and clinics. These agencies exist for the protection of the health of the public and their service contemplates teaching the simple methods of safeguarding against disease.

It seems proper therefore, for the hospital personnel, recognizing that acidosis is the fore-runner of much serious organic trouble, to appreciate the unique service of the original Milk of Magnesia (Phillips).

Frequently acidosis is first recognized when the patient enters the hospital or visits the clinic for diagnosis and treatment of some other ailment. There is usually a history of ill balanced metabolism and a tendency toward constipation. Whatever may be the underlying cause simple corrective treatment here discussed should be considered by those responsible for the treatment and care of patients in hospitals and similar institutions.

Gastric hyperacidity, acidity of the mouth and other of the more obvious manifestations of acidosis are promptly counteracted by Phillips' Milk of Magnesia which has a pronounced affinity for acids, the harmless resultant compounds being readily excreted.

The increasing use of sodium bicarbonate by the public to control "acid stomach" should be considered in this connection. Only a part of the bicarbonate is effective and that portion which produces carbon dioxide may be seriously detrimental.

Phillips' Milk of Magnesia being free from carbonates does not distend the stomach nor cause flatulence of the lower intestinal tract. Its antacid action is pronounced. A given quantity of Phillips' Milk of Magnesia neutralizes almost three times as much acid as a saturated solution of sodium bicarbonate and nearly fifty times as much as lime water. Further it has the additional merit of being laxative, a quality of importance here since constipation is so frequently the underlying cause of hyperacidity.

DOSAGE

The usual dose of Phillips' Milk of Magnesia, as an antacid, ranges from one teaspoonful (4 c. c.) to one tablespoonful (16 c. c.). This amount should be mixed with an equal portion of cold water or milk and given half an hour after meals.

For its laxative effect, the adult dose is one to two fluid ounces (30 to 60 c. c.). The aperient action may be facilitated by giving the juice of lemon, lime or orange, half an hour thereafter.

PHILLIPS' Milk of Magnesia

CAUTION. Beware of imitations of Phillips' Milk of Magnesia. The genuine product bears our registered trade-mark. Kindly prescribe in original 4-ounce (25c bottles) and 12-ounce (50c bottles) obtainable from druggists everywhere.

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unless there is extensive destruction of tissue produced intentionally through the prolonged application of the current, the wound can be closed immediately and the union is absolutely satisfactory without interruption of the circulation or impairment of the union.

Control of Incision by Electrical Current

When the growth is thus isolated by operating a switch, a different kind of current is passed on to the needle electrode which current produces a cut through the tissue without any charring of material or destruction of tissue. The striking feature is that the current cuts through the tissue, thereby producing an effect similar to that obtained when a warm knife cuts through butter or other solid fat. If a cut is made through an area not prepared, as previously outlined, the small capillaries seal up, but if any larger vessels should be cut, the switching device is instantly changed over to the coagulating current and these vessels are sealed up to prevent the flow of blood into the wound.

After the excision of the tumor, the wound can be closed and there will be excellent healing by primary union. Or if it is preferable, by the prolonged application of the coagulating current through which enough coagulable material is precipitated on the surface, the wound can be allowed to slough after about eight days. Another inspection of the wound is thus possible for the purpose of determining whether all the malignant tissues have actually been removed. Otherwise, without this special prolonged application of the coagulating current, the wound, as above stated, heals by primary union.

Two Types of Oscillating Currents

As pointed out in this outline, the Wyeth endotherm is an instrument which produces two different, specific, characteristic types of oscillating currents, one known as damped oscillations. This type is so tuned and its frequency is so adjusted that the most satisfactory effect in the precipitation of the soluble protein matters in the blood is obtained. The second type of current consists of undamped oscillations, the frequency of which is so adjusted that it produces a sterile cut while sealing the small capillaries. However, it does not produce any of the irritation and loss of blood incident to surgery with the scalpel.

The endotherm, therefore, is an instrument for the surgical removal of malignant tumors either small or extensive, based on the principle that the entire surgical procedure can be performed without the loss of blood or the possibility of malignant cells entering into the blood stream. In this way their transference to other parts of the body is effectively prevented.

The endotherm invented by Dr. George A. Wyeth contains generating mechanisms for two different types of current, one is employed for the coagulation of soluble material in the tissue, the other is used for developing excellent cutting properties without any actual mechanical cutting such as when a knife is used. With one switch, either one or the other currents can be used when required either for cutting or in case any blood vessels are encountered. The use of the endotherm makes possible the coagulation and sealing of blood vessels to prevent bleeding and the transference of malignant cells.

NEW WATER-COOLED HIGH VOLTAGE COOLIDGE TUBE

A review of literature covering the laboratory and research work leading up to the recently announced Coolidge water cooled high voltage Coolidge tube, brings the leader to a realization that this important scientific achievement is not the result of sudden inspiration and solution, but on the contrary, through years of exhaustive study and experimental work.

In 1915 Dr. Coolidge reported on the work which had already been done on a high power water-cooled tube for lower voltages (100 ma. at 140,000 volts, maximum). The one serious difficulty encountered in this work was in connection with the target, which could not withstand long continued use with this energy imposed.

While there has since appeared the Coolidge tube with a rating of 200,000 volts, the current capacity of same is comparatively limited, namely, 8 ma. The trend during the past few years having been toward the use of considerably greater energies, in December, 1922, Coolidge and Moore reported work which had been done in the Research Laboratories of General Electric Company, at Schenectady, on an *oil-immersed* tube with which as much as 30 ma. at 200,000 volts could be handled. One such experimental tube stood up under this load for 40 hours. They stated, however, that many other experimental tubes of this same general type had much shorter life in similar tests. Consequently, renewed research efforts were with the view to devising such means as would permit this greater energy to be used over longer periods, by further elimination of the factors tending to tube destruction. And in the same report by Coolidge and Moore in December, 1922, mention was made of another series of tests then being observed, in the use of a water cooled target, with the hopes of possibly *eliminating oil immersion*, and thus permit operation of the tube in air.

Adv. page 68

Sanitation, Therapeutic Practice and Plumbing

St. Alexius Hospital
Bismarck, North Dakota
Architect:
Beuchner & Orth
Plumber:
Crambs & Peet Co.

Dayton State Hospital
Dayton, Ohio

Allen Memorial Hospital
Waterloo, Iowa
Architect:
Mortimer B. Cleveland
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Because of the greater attention that is being paid to sanitation and to the furtherance of therapeutic practice, plumbing is playing a role of constantly increasing importance in hospitals.

A direct result of this is that Clow has become preeminent in the hospital plumbing field. The many and varied fixtures necessary for perfect sanitation and for therapeutic treatments can be had from Clow.

In a large number of cases Clow engineers have developed fixtures and devices to meet the special needs of individual hospitals and institutions.

The surgeon's wash-ups illustrated below, are typical Clow fixtures. Notice the handy knee-valve and the convenient, easily-cleaned arrangement. This type of wash-up represents but one of many Clow developments for hospitals.

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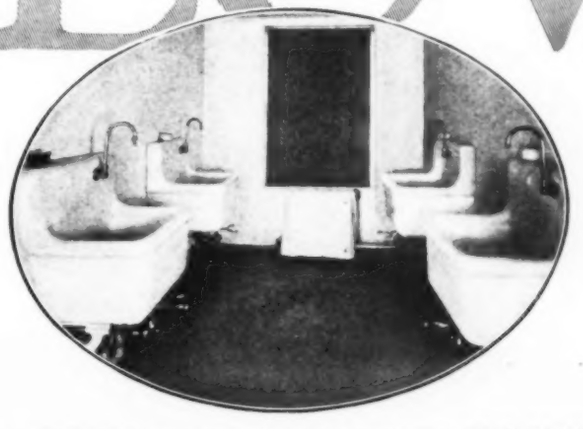

This Month

Rubber Sheeting

DOES your institution carry mattress insurance? If not it is because you are not using Universal "Invincible" Double Coated Maroon Heavy Duty Rubber Hospital-Sheeting. Guaranteed for five long years of hospital service! It will not wrinkle, crack or peel and affords a maximum of comfort to restless, bed-tired patients.

COSTS MORE AND WORTH IT

Universal "Invincible" sheeting is soft, live and resilient. Its superiority is uncontested. It wears five times as long as ordinary rubber sheeting and delivers many times the wear and satisfaction. That makes the "Invincible" the most economical rubber sheeting you can buy at any price.

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Universal "Invincible" hospital sheeting is made under our own secret process. Only the very highest quality of materials obtainable are used. Genuine Sea Island cotton fabric base is impregnated with pure India Rubber.

Our name is moulded on the selvage of each yard. It is our guarantee and your protection. Ask for prices today.

Write for Complete Catalog of guaranteed Hospital Supplies and Equipment.

Next Month—
Rubber Gloves

Universal
Hospital Supply Co.
500-510 N. Dearborn St., Chicago, Ill.

Further developmental work has been brought to a successful conclusion with the recently announced water-cooled high voltage Coolidge tube, which retains the advantages of operation in air and obviates the use of the oil tank. With this tube it becomes possible to obtain *under certain conditions* an x-ray intensity fifteen times as great as that usually obtained with the universal type (non water-cooled) high voltage tube.

In terms of x-ray intensity delivered by the universal type (non water-cooled) high-voltage tube at 5 ma. and 200,000 volts (which is perhaps the average current and voltage employed with this tube) a water-cooled tube gives at 30 ma. and 200,000 volts, peak, six times as much x-ray intensity, according to results obtained under clinical observation.

A vitally important factor in the operation of the water cooled tube, is the system for water circulation. Obviously, any system which failed to function during operation of the tube would mean immediate destruction of the target. Therefore it is most essential that an uninterrupted water supply be secured.

From the standpoint of clinical observation, the following is quoted from a preliminary report* by James T. Case, M.D., from the department of surgery, Battle Creek Sanitarium:

"Recently Dr. W. D. Coolidge of Schenectady, N. Y., has prefected the invention of a new therapy roentgen-ray tube, especially cooled by a circulating water system, applicable to either superficial or deep oentgenotherapeutic work, which is standardized as being able to withstand the *continuous output of up to* 50 *milliamperes at* 250,000 *volts*, an intensity of radiation hitherto scarcely dreamed of.

"Through the courtesy of Dr. Coolidge, last summer, there was installed in the radiotherapy department of the Battle Creek Sanitarium the first one of these new tubes, and with the assistance of my colleagues, Dr. Franklin Johnson and Frances Turley, and with many helpful suggestions from C. Darnell, E. E., a large series of animal experiments have been completed, and since the first of August, 1923, all our clinical material requiring roentgenotherapy has been handled with the new tube at high milliamperage and voltage readings. Applications formerly requiring from three to four hours may now be concluded within from fifteen to eighteen minutes, and the average dose actually desirable in any one day needs only five to ten minutes. Although Dr. Coolidge has declared that the new invention permits the employment of 50 milliamperes, we have not yet gone beyond 30 milliamperes, and our routine work has been done with between 25 and 30 milliamperes, at 200,000 to 210,000 on the tube, for the last six months. . . .

"In accordance with our experimental studies as well as our observations on all our patients subjected to roentgenotherapy since August 1, 1923, we may say without hesitation that the experiments and experiences show clearly that within the limits of our observation, that is, with a difference in the time ratio as great as 10 to 1, the physiologic and clinical effects are directly related to the amount of energy applied, regardless of the time factor.

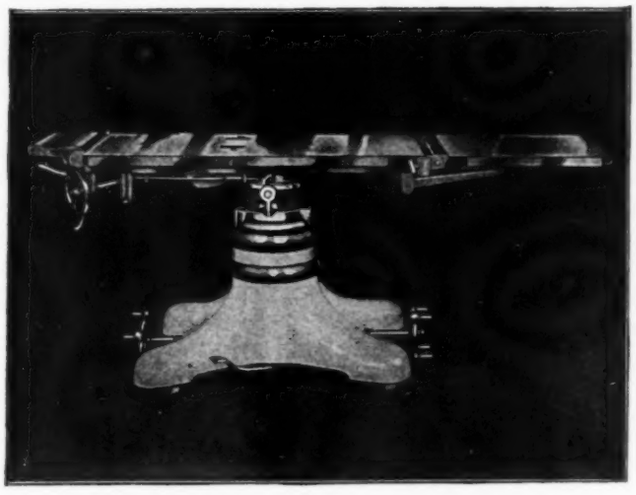
"It is evident to us that we may take advantage of the tremendous increase in efficiency of the new water-cooled Coolidge tube, shortening greatly the time of application of any desired dose, with gratification to both patient and physician, and without prejudicing the results to be ex-

*"Comparative Effects of Deep Roentgen-Ray Therapy at Low and High Voltage."—Jour. A. M. H., Jan. 19, 1924.

The Operating Table of TODAY

AND

The Operating Table of TOMORROW



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Rustless Monel Metal Top, Cast Porcelain Base
33 in. minimum height, 41 in. maximum height,
19½ in. wide, 80 in. long overall.

The OHIO Mobile Pedestal Operating Table No. 2 is rapidly gaining the recognition which it so richly deserves, viz: the Premier Operating Table of the United States.

Your Surgeons will compliment you on your selection of this table and you as Hospital Superintendent will be proud of it's possession.

Write for Full Particulars and Special Terms

AT LAST!

An overside table that will not tip over or break down.

A strong rigid piece of metal furniture which has become instantly popular with hospitals.

This table is a Bedside table as well as an Overside table and ready access may be obtained from the front while tray is over the patient.

Write at once for fuller information

Combination Bedside and Overside Table
C. A. 3913
With Porcelain Steel Top
Size 16"x20", with a height to accommodate patient.

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The Retention of Intestinal Poisons

is now recognized as the chief factor in the causation or aggravation of many acute and chronic ills. The immediate removal of these poisons is always imperative, and to accomplish this there is no remedy more effective than AGAROL COMP.—a delightfully palatable and well balanced preparation of mineral oil, agar-agar and phenolphthalein.

AGAROL COMP. not only assures prompt and satisfactory elimination, with gratifying relief from the influence of retained poisons, but presents the further advantage of promoting permanent restoration of normal bowel function.

Thus its ingredients mix thoroughly with the bowel contents—the oil softening and lubricating the fecal mass, the agar-agar retaining moisture and increasing its bulk, while the phenolphthalein furnishes the initial impulse that starts the peristaltic wave.

Not only will satisfactory elimination be accomplished without delay, but as a result of the continued effect of Agarol Comp. on the secretory and mechanical processes of the bowel, regular evacuations will follow naturally without requiring the aid of any further medication.

AGAROL is the *original* Mineral Oil—Agar-Agar Emulsion, and has these special advantages: Perfectly homogenized and stable; pleasant taste without artificial flavoring; freedom from sugar, alkalies and alcohol; no contraindications; no oil leakage; no griping or pain; no nausea or gastric disturbances; not habit forming.

Bottle and literature mailed gratis, upon request.

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pected in the light of the mass of data already published based on the much slower rate per minute of application. We have been especially happy to note a diminution in the frequence and severity of postirradiation sickness, which is now seldom observed in our practice, although we have not cut down the total amount of irradiation administered at one sitting."

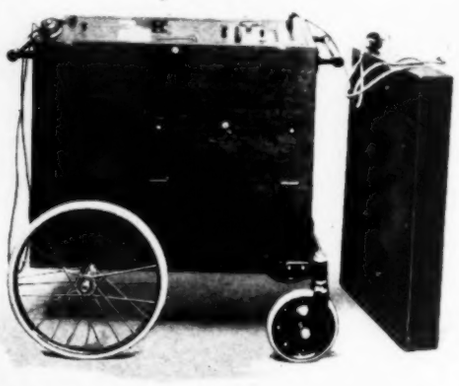
THE STETHOPHONE—A MULTIPLE ELECTRICAL STETHOSCOPE

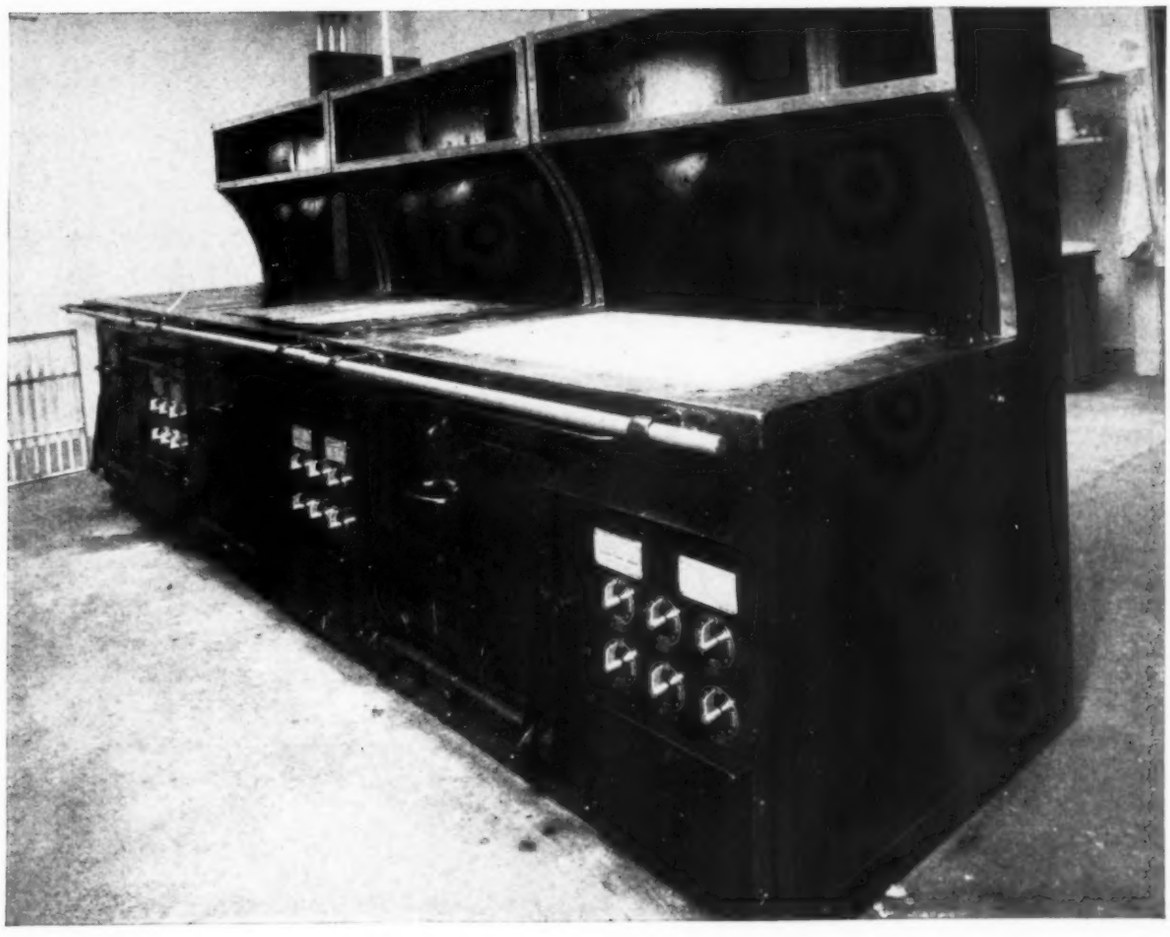
At the request and with the active cooperation of Dr. Richard Cabot of the Massachusetts General Hospital, Boston, Mass., Dr. H. B. Williams of the College of Physicians and Surgeons, New York, N. Y., and Dr. C. J. Gamble of the medical school of the University of Pennsylvania, the research laboratories of the American Telephone and Telegraph Company and the Western Electric Company have for several years been engaged in developing a multiple electrical stethoscope. The idea kept in view in this development was to produce an instrument capable of: (1) great amplification of the body sounds of interest in auscultation; (2) better quality of reproduction than is possible with the ordinary acoustic stethoscope; (3) greater ease of operation than is possible with the ordinary acoustic stethoscope; (4) rejection of all sounds to which it is not desired to listen; (5) sufficient amplification to permit the use of a great number of individual receivers.

The instrument has been named the stethophone. The stethophone makes it possible to hear heart murmurs, rales and all other body sounds with greater clearness than is possible with the ordinary stethoscope and to hear some very faint sounds which are impossible to detect with the ordinary stethoscope.

The stethophone is highly efficient in its reproduction of sounds of all the frequencies of interest in auscultation. The enormous amplification capacity of the instrument makes it especially valuable for physicians whose hearing has become somewhat impaired. The energy of the sounds reproduced by the stethophone may be made a thousand times greater than that of the original sounds as heard by the ordinary stethoscope.

Two classes of work for which the stethophone has proved especially valuable are consultation work and instruction clinics in medical colleges. The stethophone is particularly valuable for the last mentioned work, as it is possible to wire an auditorium with an individual receiver for each student. The stethophone is capable of energizing as many as 600 of these receivers. For such use the patient and the stethophone may be located in the





A Typical Hospital Electric Kitchen

Saving $1,200 a year in fuel cost

These three electric ranges and an electric bake oven serve for 280 persons; an average of 27,600 meals per month.

Cost per meal—4-10ths of a cent. This hospital is saving $100 every month over their previous fuel cost, besides having a cleaner, cooler, more efficient kitchen.

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auditorium or at a distance, as in the ward of a hospital connected by wire to the auditorium.

The apparatus is assembled in a self-contained tea-wagon type of cabinet mounted on rubber tired, ball-bearing wheels. This cabinet also contains the batteries for energizing the vacuum tubes which the stethophone employs.

The stethophone consists of the following essential apparatus: (1) a contact electrical transmitter; (2) a three stage vacuum tube amplifier with adjustable volume con-

trol; (3) a group of five electrical filters for eliminating all sounds to which it is not desired to listen; (4) the number of output receivers required for individual observers; (5) a six-volt storage battery and 130-volt dry battery.

NEW BEDSIDE TABLE

A bedside table embodying several new features has recently been designed. It is made of steel and finished in all standard shades by a heat process. The part which

is adapted to extend over the bed is of ceramic enamel, (commonly called porcelain enamel), and is, of course, easily cleaned. The table has two tops, one of which can be raised to any desired height and swung into position

Quality *Service*

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Portable Electric Serving Table

Indispensable for Ward service

Every Modern Hospital Should Use this Time and Labor Saving Apparatus

A WONDERFULLY efficient apparatus electrically heated —by attaching to the most convenient electric socket. Meat Tray, Cover and Top of Table are of Nickel Silver and the jars are of Solid China. The Dish Closet below comes in Galvanized or Russia Iron with Nickel Trimmings. The wheels are Rubber Tired.

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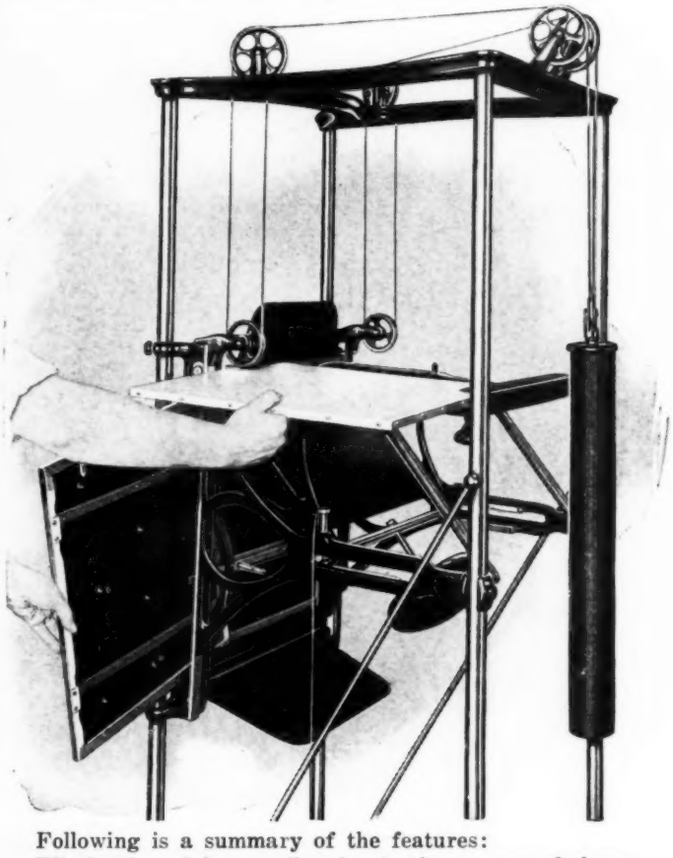
over the bed. When this is done an ingenious arrangement provides an extension foot to go under the bed to prevent tipping. This foot, when not in use, is out of the way under the table.

Another new feature is an arrangement which prevents the movable top from marring the stationary top in closing by preventing the contact of the two parts until they are exactly square with each other.

ROENTGEN UNIT FOR STEREO CHEST EXAMINATIONS

A new Roentgen unit, in the form of a balanced cassette changer, has recently been placed on the market. In its construction and operation some new and ingenious mechanical principles are applied, contributing to a smooth action in the changing of position of the two cassettes. The announcement directs particular attention to the fact that in this design the usual wear and tear, due to shifting of positions of these comparatively heavy parts, is eliminated by resorting to the law of heavy parts, and to the law of gravity, which makes this shift a natural one, in contrast to mechanical propulsion. Hence the name balanced cassette changer.



Following is a summary of the features:

Elimination of jar or vibration in the process of changing position of the cassettes; noiseless operation; provision for stereo-radiographs with patient in either stand-

Henry Ford Hospital School of Nursing and Hygiene

Albert Kahn, *Architect*

This splendid nurses' school in Detroit is fully equipped with Duriron chemical proof drain pipe from its laboratories.

The protection Duriron affords against failure—the assurance that walls, ceilings and finish will never be ruined by leaking, corroded drain pipe, makes Duriron an essential specification for all lines that carry acid wastes.

The DURIRON COMPANY DAYTON·OHIO

The Informal Patient

THE informal patient is a part of your practice—the unprofitable part.

He is not ill enough to ask your formal attention; still he knows he is far from well. So he consults you on the golf links, at social affairs, when he meets you on the street.

Sometimes he's the "tight" one, who aims to avoid a fee by pumping you for professional advice under the cover of casual conversation. You know this type and how it should be handled.

But usually he's a good friend who regards you as *his* doctor. He comes to your office whenever he's actually ill, and the rest of the time he can't see why you wouldn't be interested in a catalogue of his daily pains and aches.

"What do you suppose is the reason why every time I—"

You listen resignedly to your informal patient. If you detect a suspicious symptom you tell him so. Ordinarily you find his recital is the usual story of overeating, lack of exercise, indulgence in "moderate" stimulants. You give your advice freely and gladly, for you have come to regard your service to patients in your office as only one phase of your responsibility to your community.

When your advice takes this form—"Better cut down on your smoking, and stop coffee altogether"—as it frequently does—you can follow the example of thousands of physicians and recommend Postum.

Because of its distinctive Postum flavor and its absolute freedom from drug stimulants, Postum is today the favorite hot drink in 2,000,000 American homes. If your patient will write us for a free sample and then give Postum a thirty-day trial, he'll like Postum, too.

Postum is whole wheat and bran, skillfully roasted, with a little sweetening. Instant Postum made with hot (not boiled) milk is a wholesome, body-building beverage for the children and convalescents. It offers an appetizing vehicle for increased milk in the diet.

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Window Shades

The first Athey Perennial Window Shades made—more than 10 years ago ***—are still on the job and in good condition.*** And unless they suffer some unusual mishap they should be good for many years more.

They are made of a Coutil weave Herringbone cloth—*as near indestructible as cloth can be made.* Rain won't ruin it and it dry cleans beautifully. ***And there is nothing about the shades to get out of order***—no springs, latches or catches to slip, stick or break.

Make awnings unnecessary —afford perfect ventilation

Athey Perennial Shades *fold like a fan.* They can be raised from the bottom or lowered from the top—shutting out the direct rays of the sun, without shutting out all the light and air. ***Building managers have found that with them they don't need awnings.***

Detailed drawing showing construction and operation of Athey Perennial Window Shades.

Also: By lowering the shade to about 10 inches from the window stool, and lowering the upper sash about 10 inches, the sun's rays superheat the air between the glass and the shade. This superheated air must flow up and out above the sash. *This draws the air from the room and automatically provides perfect ventilation.*

Athey Products

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Perennial Window Shades Disappearing Partitions
Skylight Shades Cloth-Lined Metal Weatherstrips

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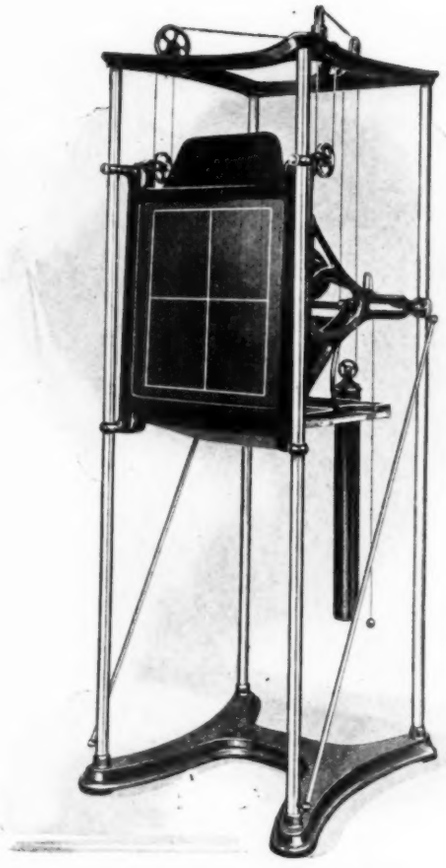


ing or sitting position; speed, selective and consistently duplicated; simplicity in manipulation; convenience for both operator and patient; operable from either side so as to conform to any room arrangement; rigidity; compactness, so that the roentgenologist will not have to forego its advantages because of lack of space; durability—no wearing out of parts.

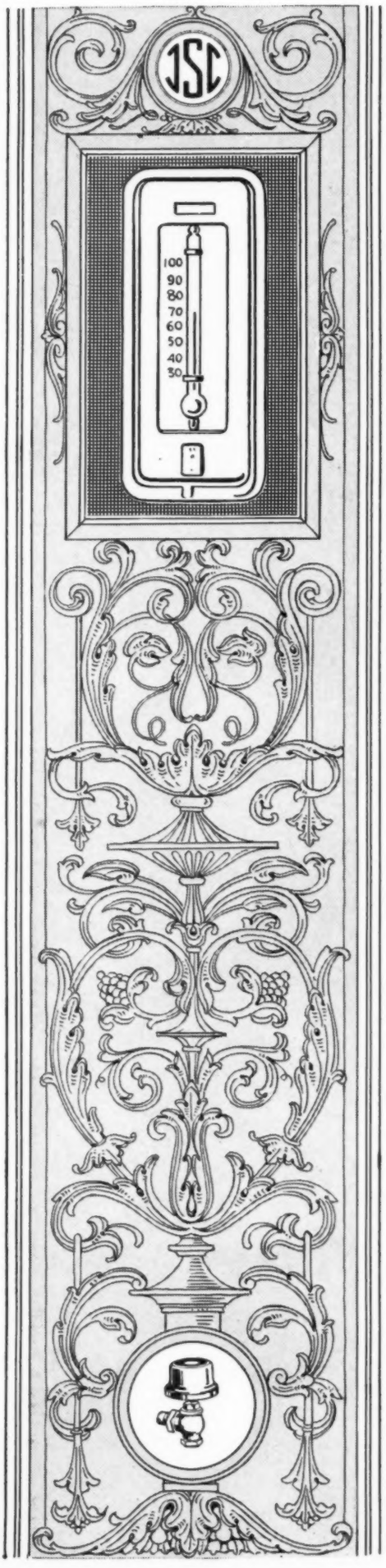
Figure 1 is the front view of balanced cassette changer. The carrying mechanism is adjustable for height, for the accommodation of patient either standing or sitting; this movement is through the counterweight shown suspended in the rear.

Figure 2 is a close-up, looking into the rear of the unit, showing accessibility for quick insertion and removal of the two cassettes. In this illustration the position of the cassettes is as after the completion of the two exposures. Accordingly, the operator's right hand shown in the picture is in the act of removing the cassette used for the first stereo exposure; the other cassette, therefore, is in the position originally held by the first. The shifting of these positions is controlled by the mushroom-shaped weight, situated directly on a line bisecting the right angle formed by the two cassettes. To release the weight, the operator pulls the trigger cord on the side of the Apparatus (see illustration) and the second cassette is automatically brought up into position for the second exposure.

The apparatus answers the requirements to the hospital where stereo-roentgenography of the chest is more or less frequent in the day's routine.

STEAMATIC EGG COOKER

An automatic egg cooker which will cook four eggs at one time in a single steam chamber has been devised. The device consists of a simple electrical cooker, shown here, in which the eggs are placed and are cooked by means of the steam which envelopes them. The steam is pro-



Three Great Iowa Hospitals

Finlay Hospital, Dubuque; St. Joseph Hospital, Mason City; General Hospital, Mt. Pleasant—all have The Johnson System of Temperature Control installed. The Johnson System is giving admirable services in hospitals everywhere. It is an accepted fact that *automatic control* of hospital temperatures, humidities and fuel consumption is necessary. It is an accepted fact that The *Johnson System* is the totally successful control. The strict requirements in hospitals *demand* The Johnson System of Control.

The Johnson System is manufactured completely by The Johnson Service Company, and is not made of assembled parts from various manufacturers. And The Johnson System is installed entirely by Johnson Service Company men: and is not left to a local contractor. That, in great part, is what makes its operation so decidedly successful.

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With AMERICAN Paper Products of Distinction dietitians can afford to add the little home like refinements to the service. These paper articles are quite inexpensive, very convenient and withal so remarkable in their imitation of fine lace and linen that they are eagerly welcomed by the patient.

For example, AMERICAN Tray Covers are beautiful reproductions of embroidery and linen. They are fashioned to fit exactly the standard aluminum trays. They are water resistant and marvelously fresh and sanitary in appearance and fact.

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duced by the water which is poured on the eggs. The water immediately turns on the electricity and boils at once, and the amount of water determines the amount of cooking namely: for soft boiled, one dipper; medium boiled, two dippers; and hard boiled, three dippers. The steam escapes through the vent of the cylinder and its cessation indicates that the eggs are cooked ready to serve, hence the electricity shuts off automatically.

The principle underlying the working of the cooker is the action of the water upon the electricity and vice

versa. When the water is poured in, it drips down to the metal plates at the bottom, gets between the two plates thereby making the electrical contact. The electricity is thus turned on and the current passes through the water making it boil at once. The device uses proportionately the same amount of electricity as an electric iron.

DIETETIC NEWS NOTES

Miss Kate Daum, Ph.D., has resigned as director of the dietary department of the Presbyterian Hospital. As Miss Daum is leaving the hospital field we feel it is a loss to the profession as well as to the Presbyterian Hospital.

Miss Dorothy McCue, who was assistant dietitian at Post Graduate Hospital, New York, N. Y., has gone to Broad Street Hospital to take charge of the dietary department. Miss Helen Lane, formerly of Willard Parker Hospital, succeeds Miss McCue at Post Graduate Hospital.

Miss Verna March has accepted a position as dietitian at Muhlenberg Hospital, Plainfield, N. J. after completing a course of student training at Montefiore Hospital, New York, N. Y.

A. D. A. TO HOLD ANNUAL MEETING IN CHICAGO

The American Dietetic Association has accepted the invitation of the Chicago Dietetic Association to hold its annual meeting in Chicago next October.

The last monthly meeting of the Chicago Association was held in the classroom of the John Crear Library, March 20.